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Knowledge Sharing Behavior
in the Northwestern Region of Russia

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Information and Knowledge Management
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ABSTRACT

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Abstract: Knowledge Management (KM) techniques have been widely used in organizational frameworks all over the world during the past decades. Nowadays, companies tend to integrate effective KM solutions, pursuing the idea of high competitiveness and employee involvement. Knowledge-sharing behavior is internally cultivated and has the potential of bringing companies to a new level. However, while some practices have proven to be useful, others may not work at all. Therefore, the factors which impact the effectiveness of organizational knowledge sharing can be examined and transformed into a theory-based conceptual model in order to support the core proposal of the study – that successful knowledge management affects the overall competitiveness of the firm.

The purpose of this master's thesis is to test an existing conceptual framework in order to reveal the factors which influence the knowledge-sharing behavior and, therefore, a firm's competitiveness in the context of Northwestern region of Russia. The choice of this particular area is due to the lack of academic insights regarding knowledge-sharing practices in Russia. Furthermore, the absence of knowledge sharing as a holistic concept in Russian organizational culture, makes this topic potentially original and requires scientific explanation and interpretation. The conceptual model developed by Youssef, Haak-Saheem & Youssef, (2017) is tested in the context of Russian organizational management involving 120 participants from various industries operating in the Northwestern region of Russia. The data are analyzed through the structural equation modelling method in order to test the impact of top management support, openness and trust and reward system on the knowledge-sharing behavior and consequently their impact on the firm's competitiveness.

The findings illustrate that the construct of openness & trust knowledge positively affects the organizational knowledge sharing. However, the top management support and reward system do not have any significant effect, therefore it is concluded that these factors do not have a strong impact on the knowledge sharing in Russian firms. In addition, the SEM results show that the knowledge-sharing behavior has a significant effect on the firm's competitiveness. The mediation analysis indicates that the knowledge-sharing behavior only mediates the relationship between openness and trust, and firm's competitiveness. Moreover, a path between openness and trust, and firm's competitiveness is moderated by the academic education level of the respondents when

multi-group analysis was performed. This master thesis concludes that openness and trust are fundamental factors affecting the knowledge-sharing behavior in Russian organizations, as well as having an impact on the overall competitiveness level.	
Keywords: knowledge economy, knowledge management, knowledge sharing, competitiveness, structural equation modelling (SEM), Russia	
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LIST OF ACRONYMS

AVE	Average Variance Extracted
CB-SEM	Covariance-Based Structural Equation Modeling
CFA	Confirmatory Factor Analysis
CR	Composite Reliability
ICT	Information and Communication Technologies
IM	Information Management
IRM	Information Resources Management
KM	Knowledge Management
KS	Knowledge Sharing
NIH	Not-invented-here Syndrome
OECD	Organisation for Economic Co-operation and Development
PLS-SEM	Partial Least Squares Structural Equation Modeling
SECI	Socialization, Externalization, Combination, Internalization
SEM	Structural Equation Modelling
TRA	Theory of Reasoned Action

Chapter 1: Introduction

This master's thesis focuses on knowledge-sharing behavior as one of the key concepts in an organizational setting and it examines this concept in the context of Knowledge Sharing (KS) and Knowledge Management (KM). The main purpose of this master's thesis is to investigate how knowledge-sharing behavior impacts an organization's competitiveness and assesses the role that factors such as openness and trust, top management support and the reward system play in terms of knowledge management practices, and in particular on the firm's competitiveness at the organizations in the Northwestern region of Russia. The thesis includes proposed conceptual model and a questionnaire based on data collected from 120 Russian employees working in various organizations.

In this introductory chapter, the main topic of the research will be discussed, followed by the objective reasoning and motivation of the chosen area of study. The conceptual model will be further introduced (Chapter 3), and it will be viewed in the context of knowledge management. The model will be supported by the findings received through the questionnaire (Chapter 5). The thesis' structure can be found at the end of the introduction chapter.

1.1. Motivation of the topic

"In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge...successful companies are those that consistently create new knowledge, disseminate it widely throughout the organization, and quickly embody it in new technologies and products" (Nonaka, 2007, p. 162).

In the past decades the role of knowledge and intellectual resources has risen significantly in terms of economic growth and innovative development. The new emerging economy which is based on the knowledge management – a "knowledge economy" is becoming a fundamental ground for the modern management. As a result, many companies are facing the challenge of transforming intellectual capital (human knowledge) into intellectual assets (corporate knowledge). Constantly growing demand for the knowledge sharing has caused

a high academic interest in the management of knowledge, which has generated plenty of informal research on the KM contribution to the business value creation (Heisig, Kianto, Perez, & Fathi, 2016). The lack of the proper knowledge sharing has been described in many sources, for example, Heisig et al. (2016) claim that according to the data collected from US Fortune 500 companies, they lose a total of $31.5 bn every year from the poor knowledge-sharing behavior among employees (Heisig et al., 2016; Myers, 2015).

However, while the majority of the studies conducted are Western-oriented and are mostly focused on the Western organizational culture, the implications of the analyzed data are not always found to be relevant in the non-Western market economies. Culture has a massive impact on the company's climate and it is seen as a set of basic ideas and values that help community members to adapt to the external environment (“how to survive”) and to internal integration (“how to stay together”) (Andreeva & Ihilchik, 2006; Schein, 1992).

Additionally, in most Russian companies’, organizational culture is simply “absorbed” by employees in the process of work without any additional formalized explanations. Moreover, many Russian employees consider formalized explanations of organizational culture to be artificial and unpleasant (Andreeva & Ihilchik, 2006). Furthermore, quite often knowledge-sharing skills in the organizations are absent or they are neglected due to the lack of information or low motivation of the employees. Therefore, such a vague framework of an organizational culture may undermine the KM practices' implementation. Thus, the purpose of this master’s thesis is to reflect on the Russian knowledge sharing practices in terms of the organization management.

1.2. Background

In the modern cross-cultural and saturated business world it is still impossible to distinguish one holistic approach towards organizational management. "Organizational culture is a system of norms, rules, habits, values; defined, accepted or rejected by the members of an organization, which is apparent in their behavior and reactions" (Deal & Kennedy, 1982, 2000; Heidrich, 2000; Kotter & Heskett, 1992; Schein, 1992, as cited in Jarjabka, 2014,

p.20). As organizational culture is deeply embedded in the local culture, certain challenges may occur while implementing such concepts as organizational management and knowledge management.

An essential factor that drastically differentiates Western and Russian organizational culture is the unusual level of collectivism/individualism. This is due to the fact that Russians are prone to collectivist behavior on a small group scale, however, having left their “close" circle, they tend to demonstrate the growth of individualistic behavior (Andreeva & Ihilchik, 2006; Holt, Ralston & Terpstra, 1994; House et al., 2004). In such conditions, Russian managers may be challenged to find the ways of unifying employees and creating an environment based on trust and openness for the future knowledge sharing.

In many KM works, researchers including Nonaka & Takeuchi (1995) and Glisby & Holden (2003) tend to oppose the Western and Eastern approaches regarding the development of theories and managerial practice. Firstly, Russia, being "somewhere in between" often falls out of this classification which leaves a lot of practical questions to answer. Secondly, although there are studies on the applicability of the foreign management theories in Russia (Andreeva, 2008; Elenkov, 1998; Fey & Denison, 2003), only a few of them review the knowledge management (Andreeva & Ihilchik, 2006; May, Puffer & McCarthy, 2005).

Unfortunately, most of the Russian-language literature on the knowledge management, does not take into consideration the applicability of the Western organizational management concepts in Russia (Inozemtsev, 2000; Marinicheva, 2008; Milner, 2006, as cited in Andreeva & Ihilchik, 2006). Thus, there is a gap which could be bridged with the help of the following work by observing the characteristics of the knowledge management in Russian organizations.

1.2.1. Knowledge management

Knowledge management (KM) has recently become a popular practice due to the necessity of knowledge workers to share and convey a great internal potential which needs to be revealed: their embedded skills and experiences. Undoubtedly, knowledge management is

one of the keyways to succeed in a business perspective, as it is a source of the intellectual capital in every company. Knowledge management is also known as a systematic, goal-oriented application of measures to steer and control the tangible and intangible knowledge assets of organizations, with the aim of using existing knowledge inside and outside of these organizations to enable the creation of new knowledge, and generate value, innovation and improvement out of it (Wunram, 2000). Knowing how to organize the knowledge flow, an organization can improve the quality solutions, increase its productivity and enlarge the fields of practice.

Nowadays, many companies search for the ways to stay competitive and successful in the current market and one of the latest trends has been creating "learning organizations" (Goncalves, 2012; Marquardt, 2011; Senge, 2006; Serrat, 2017) which are based on the KM practices. As companies foresee that there is a great potential embedded in their personnel, they become more interested in continuous learning and knowledge sharing facilitation. However, the lack of information regarding organizational culture attributes participating in the knowledge-sharing process may hinder its efficiency and progress. Moreover, the unsystematic flow of knowledge into an organization or the total negligence of strategically important knowledge may lead to an opportunity loss and even performance collapse. As a result, due to the high competitiveness of the modern business environment, companies seek the best KS solutions and methods (Golitsina, Kupriyanov & Maksimov, 2015; Maier & Hadrich, 2011; Serrat, 2010).

1.2.2. Skills shortage

In the modern competitive world, there is no place for the non-professionals – there is a constant need for qualified and skilled workers. Experts and highly skilled workers constitute the core human capital of an organization. The concept of human capital originates from the economic literature: professor of Economics and Sociology at the University of Chicago Gary S. Becker explained the nature of human capital in his work *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (1964). "An investment in human capital would usually steepen age-earning profiles, lowering reported earnings during the investment period and raising them later on" (Becker, 1975, p. 43).

Human capital is described as the combination of knowledge, skill, creativity and health of the person. It is a type of intangible assets – not a physical nor a financial one (Pasban & Nojedeh, 2016). Investments into the human capital promote economic growth in a long-run: organizations are challenged not only to retain skilled employees but also to constantly encourage them to adopt a habit of creating, sharing and applying their knowledge, thus, increasing organizational knowledge (Pasban & Nojedeh, 2016; Stiles & Kulvisaechana, 2003).

However, many organizations are still facing the skills shortage across the business landscape. In his blogpost, Gillian Livingston (2013, p. 1) refers to a problem as a "skill crisis which is a barrier to competitiveness". Michael Denham, a managing director for Accenture in Canada states that the skills shortage induces companies to rethink their traditional patterns and habits. In other words, companies need to diversify the spectrum of their businesses and find new solutions through developing new organizational structures, operating models so that they are focused on the skills rather than on the business functions (Livingston, 2013). Furthermore, employees with different backgrounds and qualifications can participate in the work of HR, logistics or operation departments. Thus, multitasking and diversification contributes to a better understanding which skills employee possesses and how to apply it in terms of competitive advantage. This approach is a cost-cutting method and it also contributes to developing a knowledge sharing groundwork (Livingston, 2013).

The greatest challenge of all human resource departments is to bridge the gap between the lack of talent and skills and firm's competitiveness. In other words, employees' education and training are undoubtedly beneficial but recruiting potentially highly qualified personnel is yet a challenge. An efficient recruitment is also a way for a better talent acquisition. Many businesses are in pursuit of the perfect candidate who has to fulfil very strict and narrow criteria. In order to attract and recruit suitable employees, organizations should rather seek individuals who prove their ability to learn and who fit the company's culture the most. By organizing internal training programs, employers help employees to gain the necessary skills. Through creating such communities, businesses create a "pool of skilled workers" (Livingston, 2013; Nguyen, 2017).

1.2.3. Competitiveness and knowledge management in Russia

While modern economy is characterized as the economy of knowledge, the main factor in ensuring the competitiveness of the economic entities is the intellectual resources and knowledge accumulated in the organization (Kharitonova, 2013). According to Philip Kotler, competitiveness is the ability to withstand competition in comparison with similar objects (goods, services, manufacturers) in a certain market (Kotler, 1967). Therefore, the best way to maintain strategic competitiveness is the ability of an organization to dynamically adjust and receive new knowledge about the current market and consumers. This could be compared to a living system, organism or an entity in terms of innovative development. Knowledge, indeed, has a great potential and the action of sharing it is an effective approach to maintaining the competitiveness of organizations (Grant, 1996; Haak-Saheem et al, 2016; Penrose, 1952; Sabetzadeh & Tsui, 2011; Yam & Chan, 2015, as cited in Youssef et al. 2017).

It was only in the 20th century when knowledge started to be seen as a driving force for the economic development. This was due to the incorporation of industrial, technological and social changes (for example the scientific and technical progress, globalization or high competition) which served as an incentive towards the transition to a new qualitative level in the theoretical understanding of knowledge. Thus, global development has nudged the economy to view the knowledge as a factor of economic growth and as a potential competitiveness means (Kharitonova, 2013).

A transition from scattered companies and firms to bigger networks between the large and middle-sized companies which rely on the Internet and IT solutions allowed businesses to cooperate in the fields of technology, product quality control and innovation. Consequently, active internal (between employees) and external (between companies) collaboration raises the level of organizational empathy and trust. Moreover, it contributes to the knowledge exchange and innovation creation. Respectively, the sources of competitive advantage are

considered as the organizational abilities (competencies) which are the positive outcomes of the individual knowledge integration (Kharitonova, 2013).

Based on the studies of the knowledge management practices in leading companies across the globe, Kharitonova (2013) proposes to distinguish four types of established approaches of the knowledge management – European, American, Japanese and Russian. In this work the attention will be given to the Russian approach, compared to the European type. The European approach is characterized by a focus on the intellectual capital and on the evaluation of the company's knowledge and intellectual property level. While the European approach has been already formed and proved its functioning, the Russian approach is in "its infancy" – meaning that is still emerging and developing under the local economy. It is oriented on the combination of communication technologies and information, administrative and organizational tools, creating a corporate culture based on the knowledge management support (Kharitonova, 2013). Moreover, due to the relatively recent transition from the Soviet planned economy to the capitalism-oriented economy (Puffer & McCarthy, 2011), Russian knowledge management is still undergoing certain alterations, relying on the increasing individualism, professional qualification and competitiveness growth (Klafke. Lievore, Picinin, de Francisco & Pilatti, 2016).

Puffer and McCarthy (2011) add that the knowledge management in Russia was traditionally viewed as a not important technique and it was ill-managed. However, a market transition increased the demand for the business management education (McCarthy, 1991; Puffer, 1992, as cited in Puffer & McCarthy, 2011). Consequently, Russian companies have faced the problem of a low applicability of the Western teaching methods and content relevance, and, a as result, unwillingness of the managers to perceive the new information (Czinkota, 1997; Gilbert & Cartwright, 2008; Holden & Cooper, 1994; Warner, Denezhkina & Campbell, 1994, as cited in Puffer & McCarthy, 2011). Mentioning the cultural imprints, which are deeply rooted in the Russian business culture and ethics, (Taylor, Kazakov & Thompson, 1997, as cited in Puffer & McCarthy, 2011), authors address such culturally based habits as *sviazi* (connections) and *blat* (the use of favors). Combined with the Soviet past's inherited traits (collectivism, paternalism, admiration of strong leaders, fear of responsibility,

mistrust of outsiders, reliance on one own's own networks), such habits clearly promote corruption and "hinder Russia's economic development and integration into the global economy" (Puffer & McCarthy, 2011, p. 25). Therefore, quite often, a Russian management culture and business practices are "counter to internationally accepted ways of doing business" (Puffer & McCarthy, 2011, p. 25). Hence, it allows to conclude that Russian knowledge management is highly influenced by the specific socio-cultural factors, which are not fully presented in the Western culture.

1.3. Objectives of the thesis and research questions

It is not a secret that knowledge is the most attractive asset of the company – it is tightly linked with its strategy, competitive performance and daily managerial operations. Nowadays, many companies are facing the challenge of preventing their employees from hoarding the knowledge: the belief that hoarded knowledge is a great competitive advantage is still strong among personnel. "From the perspectives of the employees, organizations are now asking them to share the very thing that earns them the positions they hold and their hope of financial reward and advancement" (Milne, 2007, p. 28). Therefore, facilitating the knowledge sharing in a company might be hard to execute if the workers are not well-prepared or motivated enough.

Obviously, thoughtful and beneficial KM involves the participation of the employees, therefore, this master's thesis addresses the question of the workers' concern and interaction within the KM practices in Russia. In this thesis the country of choice is Russia, and the area of focus is its Northwestern region due to the differences between Russian and European economy and general distinction in the organizational culture. Russia is quite a specific market with a great potential where the knowledge management is a relatively new concept. The choice of Northwestern region is also due to the possibility to collect data, carrying out the questionnaire and personal interest in the region. Thus, this master's thesis investigates the particular qualities of the knowledge management executed in Russia. Furthermore, the goal of the thesis is to find out how implemented KM practices in Russian companies affect the creation of greater value and efficiency gains. In other words, the collected data helps to identify the correlation between knowledge sharing and several influential factors such as:

openness and trust, top management support and reward system implemented in Russian companies. Moreover, this thesis puts a question of a linkage between the knowledge sharing and overall competitiveness of a firm in the Russian market – the analysis of the observed information provides the evidence of the following statement. The overall aim of this master's thesis is to identify the factors which are conducive to the knowledge sharing activities inside the organizations in Russia and which, in their turn, promote higher competitiveness.

Therefore, the following research questions are formulated:

- RQ1: How do openness, trust, top management support and reward systems promote the knowledge sharing in organizations?
- RQ2: How does the knowledge sharing affect the overall competitiveness of the organizations?

1.4. Structure of the thesis

This section presents a designed structure of this master's thesis. Introduction chapter is followed by the chapter which covers the key concepts and previous research on KM and knowledge sharing. First, the concepts of knowledge and information are introduced (Sections 2.1-2.2), leading to the discussion of the knowledge types, which are illustrated in the SECI model (Section 2.3). Section 2.4 describes the knowledge economy as an essential prerequisite for the successful knowledge management (Section 2.5) and knowledge sharing (Section 2.6) implementation. The chapter goes on with the discussion of how knowledge sharing influences the organizational performance (Section 2.7).

Chapter 3 introduces the research context of Russia – it describes the key features forming the economy of Russia (Section 3.1), provides the insights into the modern knowledge management (Section 3.2) and knowledge sharing practices in Russia (Section 3.3). The following sub-sections address the specific knowledge sharing models implemented by the managers in Russian companies (3.3.1) for the performance growth (3.3.2), the knowledge management challenges (3.3.3) finishing with the knowledge-sharing hostility phenomenon

and its determinants (3.3.4). The competitiveness factors in the Russian market are further discussed (Section 3.4), followed by the overview of the specific factors (top management support, openness and trust, reward system) and their role in the organizational knowledge sharing framework (Section 3.5). The chapter ends with the conceptual model representation (Section 3.6).

Chapter 3 is followed by a methodology chapter, introducing a comparative description of the quantitative and qualitative research methods (Section 4.1), subsequently providing the reasoning for the chosen approach (Section 4.2). Moreover, the measurement models for the relationships between proposed constructs are represented in Section 4.3 and Section 4.4. The methodology then goes on to the sample and data collection (Section 4.5).

The results and data analysis are discussed in the Chapter 5 in detail. The main focus of this chapter is to reveal the main outcomes of the following study and to validate the conceptual model's applicability in the context of the Russian organizational management. Obtained data is reviewed under the descriptive analysis section (5.1), presenting the demographic background of the respondents: age (Section 5.1.1), education (Section 5.1.2), industry type (Section 5.1.3) and the job function of the participants (Section 5.1.4). Finally, the chapter leads to the measurement model results (Section 5.2) and the structural model results (Section 5.3). A multi-group analysis (Section 5.4) and a mediation analysis (Section 5.5) are further discussed, implementing some qualitative insights (Section 5.6).

Finally, the last chapter presents the discussion and the practical implications of the following research, touching upon the main findings (Section 6.1), subsequently providing the answers to the proposed research questions (Section 6.2). It further explains a theoretical and practical contribution of this master's thesis, illustrating an alternative conceptual model (Section 6.3). Moreover, the chapter considers the possible limitations applied to this study (Section 6.4) and future research (Section 6.5).

Figure 1. Structure of the thesis

Chapter 2: Key concepts and previous research on KM and knowledge sharing

The following chapter focuses on the concepts of the knowledge and knowledge sharing. It gives a deeper understanding of what knowledge is and what are the advantages of sharing it in the organizations. The described SECI model illustrates the processes happening under knowledge sharing in detail – a conversion of tacit and explicit knowledge. Moreover, this chapter aims at bringing to light such a concept as the knowledge economy – a modern knowledge-driven society. Being opposed to the traditional economy, the knowledge economy focuses on the intellectual property advocacy and innovation integration. Furthermore, this chapter addresses several proposed competitive factors (openness and trust, top management support and organizational reward system) and their ability to affect the knowledge sharing processes in organizations and firm's competitiveness.

2.1. Definition of knowledge / epistemology of knowledge

Knowledge is "[1] facts, information and skills acquired through experience or education; the theoretical or practical understanding of a subject; [2] the sum of what is known; [3] information held on a computer system; [4] *in philosophy:* true, justified belief; certain understanding, as opposed to opinion; [5] awareness or familiarity gained by experience of a fact or situation (Oxford dictionary, 2018).

The first person who has seriously brought the subject of knowledge was philosopher Plato – one of the main figures who had a great influence on the development of the Western Philosophy. "Plato (429? –347 BC) is, by any reckoning, one of the most dazzling writers in the Western literary tradition and one of the most penetrating, wide-ranging, and influential authors in the history of philosophy" (***Stanford Encyclopedia of Philosophy*** (***SEP***), 2004). According to Michael Welbourne (2001), Plato claimed that it is human inborn interest *to know* and to obtain *the knowledge* about the nature of things. Moreover, he believed that knowledge could be acquired and could be taught to other people. (Welbourne, 2001). Thus,

endowing the personal knowledge with all the features of an asset, Plato emphasized the role of the human intellectual capital.

The contemporary view on knowledge has been described in the knowledge management literature with a great focus on the subjectivity and situational, implicit and dynamic nature of the knowledge (Alvesson & Karreman, 2001). "Knowledge is a subset of information; it is subjective; it is linked to meaningful behavior; and it has tacit elements born of experience" (Leonard and Sensiper, 1998, p. 113). According to McDermott (1999, as cited in Alvesson & Karreman, 2001), knowledge is always recreated in the present moment. Most of us cannot articulate what we know. It is largely invisible and often comes to mind when we need it to answer a question or solve a problem.

One of the most interesting traits of knowledge is that the production of knowledge for the sake of knowledge does not have any socio-economic value. Meaning that knowledge on its own cannot meet the financial needs of a human. Nevertheless, the product creation within the economy starts with a certain piece of knowledge leading to its future implementation. Furthermore, the only source of knowledge is human, therefore, the knowledge creation is tightly linked with one's living standards – the higher they are, the more likely the qualitative knowledge would be generated (Gluznitskiy, 2017).

Nowadays, the perception of knowledge as of a commodity is widely justified by its public aspect – the ubiquitous usage of the knowledge. In his work, Welbourne (2001) explains why the knowledge has its value – "knowledge owes its value ultimately to the value we rightly place on getting beliefs that are true". He also suggests that it naturally happens because people need to know the methods of obtaining "true beliefs" for the successful life. In other words, knowledge is a consequence of the apprehension of objective facts, an experience. People gain experience through observation, education or information exchange – it is all the result of the human interaction.

There are other definitions of knowledge which contributed to the understanding of the concept. Davenport and Prusak in their book "Working knowledge: How Organizations

Manage What They Know" (1998) had emphasized the difference between data, information and knowledge. According to them, "knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers" (Davenport & Prusak, 1998, p. 5). They claim that knowledge originates and resides in people's minds, being hard to define and concretize. Moreover, they say that it is embedded in the organizational workflow and activities. Davenport & Prusak compare the knowledge with the atomic particle – it can be seen as both process and stock. Explaining the great value of knowledge, the authors say that it is close to action – knowledge plays an important role in decision making, for example a strategy choice based on the previous experience. Having an ability to develop over time, knowledge relies on experience (Davenport & Prusak, 1998). Expertise allows companies to use previous experience for creating new: "knowledge born of experience recognizes familiar patterns and can make connections between what is happening now and what happened then" (Nonaka, 2005, p.307).

The value of knowledge has been emphasized a lot during the past decades due to the primary role of human capital in businesses. Not only has the knowledge gained great potential, it has also become a valuable commodity which is embedded in the tacit knowledge of agile workers (Dalkir, 2011). Rapid industrialization and development of IT have naturally laid the groundwork for the knowledge-intensive era. Nowadays, companies tend to create, store, share and consume the knowledge for constant improvement. "A firm only gains sustainable advances from what it collectively knows, how efficiently it uses what it knows, and how quickly it acquires and uses new knowledge" (Davenport & Prusak 1998, as cited in Dalkir, 2011, p.2).

In the world of constant work environment changes, it is essential to be able to classify, structure, detect and deploy the knowledge as a tool for successful organization work. Knowledge serves as a core asset and a platform of a company as everything is based upon it.

Numerous examples of big enterprises using knowledge sharing as a tool have proved the effectiveness of sharing information within an organization: e.g. Toyota, Ford, Dow Chemical (Yang & Chen, 2007). According to Cabrera and Cabrera (2002), in the KPMG industry survey of year 2000, 81 percent of the leading organizations in Europe and the United States said that they had, or they were planning to implement some knowledge management systems (KMPG, 2000).

The quality of the knowledge and ability to use it accordingly plays a primary role in the modern organizational management. It is not enough to possess the information, more importantly is how the company manages it. Referring to this, Dalkir states that the objective of the knowledge management is a deliberate and systematic approach to ensure the full utilization of the organization's knowledge base, combined with the human capital: individual skills, competencies, thoughts, innovations, and aspiration for a more efficient and effective organization (Dalkir, 2011).

Increasingly, companies will differentiate themselves on the basis of what they know. A relevant variation on Sidney Winter's definition of a business firm as an organization that knows how to do things would define a business firm that thrives over the next decade as an organization that knows how to do new things well and quickly (Davenport & Prusak, 1998).

In their work, Alvesson and Karreman (2001) state five problems with popular understandings of knowledge:

1) ontological incoherence;
2) vagueness;
3) an all-embracing and somewhat empty view on knowledge;
4) objectivity and robustness;
5) functionalism

By ontological incoherence Alvesson and Karreman mean the discrepancy between "knowing subjects and knowable objects" (2001, p. 998). They claim that there is a strong disparity regarding the concept of knowledge – it is described as somewhat tacit and rather

contextual simultaneously with being specific, true and verified. Thus, in our society, the knowable objects tend to exist as knowing subjects, therefore causing confusion (Shotter, 1993, as cited in Alvesson & Karreman, 2001).

Vagueness occurs when attempts to define contradictory and incoherent ideas regarding the concept of knowledge are made among the academics and practitioners. Alvesson and Karreman believe that there is lack of precision when it comes to the nature of knowledge – the literature tends to "sidestep" or "black-box" the issue (McGrath, 2000, p. 82 as cited in in Alvesson & Karreman, 2001). Thus, such an ambiguity hinders the future research.

"Knowledge is everything and everything is knowledge" – Alvesson and Karreman refer to the fact that knowledge, as an umbrella term, tends to lose its semantic power due to the versatility of meanings it is endowed with. The idea of "delimiting" the concept originates from the inability to attribute knowledge to one category – it can be encyclopaedic (facts about the world), procedural (explaining how to accomplish results), social (explaining how to utilize both encyclopedic and procedural knowledge) or explanatory knowledge (explaining the reason why) (Alvesson & Karreman, 2001). "Ultimately, knowledge has many manifestations and is also manifested in many ways – encultured, embodied, encoded, embedded, and embrained" (Blackler, 1995, as cited in Alvesson and Karreman, 2001, p. 998). Therefore, there is a great paradox – the more extensive the notion is, the less information it transmits.

According to Alvesson and Karreman, the knowledge management theory's belief that the knowledge can be extracted from an individual, kept and reconstructed contradicts with the fact that even though the formal knowledge is rather rational, people tend to behave less rationally (Fores et al., 1991, as cited in Alvesson and Karreman, 2001). Only an extremely small number of workers acts based on the knowledge received from the handbook or scientific publications – most of the time they prefer to rely on their experience, practice or business context.

Another obstacle for understanding the nature of knowledge is a common belief that knowledge is necessarily functional, however, the answer why it is functional tends to stay in the grey area. Alvesson and Karreman (2001) question the usability and the positive side of knowledge in general. Instead, their discourse aims at revealing the exploitative and power aspect of the knowledge – quite often the norms of "what things should be like" are imprinted, therefore it emphasizes a discrepancy between "current imperfections and the ideal" (Alvesson and Karreman, 2001, p. 999). Thus, it could be exploited by the consultancy agencies for their own benefits (Clark, 1995, Ch. 1; Sturdy, 1997 as cited in Alvesson and Karreman, 2001). Moreover, according to Foucault (1976, 1980), knowledge is a power tool – "it creates space for the exercise of power… in return, (it) makes knowledge possible" (as cited in Alvesson and Karreman, 2001, p.1000). Being power-driven, knowledge tends to construct and create rather than revealing the truth, therefore to subordinate and even control reality, subjects and institutions (Alvesson & Karreman, 2001).

2.2. Knowledge vs. Information

In this master's thesis, the concepts of knowledge, knowledge sharing and knowledge management (KM) are not equal to the concepts of information and information management (IM). According to Widén-Wulff, KM is a newer concept "in which the human aspects have emerged as additional insights into the traditional IM and information resources management (IRM) field" (2007, p.7). The organizational context dictates the difference in perception as the knowledge tends to be more closely connected to action than to information (Widén-Wulff, 2007). To illustrate that statement would be fair to say that people make decisions based on the information that they integrate with their own knowledge (Sinotte, 2004, as cited in Widén-Wulff, 2007).

Various sources related to the knowledge management practices and research tend to cite Albert Einstein: "Knowledge is experience. Everything else is just information" (1879-1955). Famous theoretical physicist was right – knowledge is gained through the human experience and it is usually contrasted with information. In his work, Sveiby (1997) says that "knowledge cannot be described in words because it is mainly tacit ...", and "information

and knowledge should be seen as distinctly different. Information is entropic (chaotic); knowledge is nonentropic. The receiver of the information – not the sender – gives it meaning. Information as such is meaningless" (p. 38, 49). Therefore, the tacit knowledge is only useful when the receiver is able to understand it, thus, the knowledge is only beneficial when it is being applied and utilized.

These are the several characteristics created by Sveiby (1997) represented in Table 1 that help to distinguish the knowledge from information, therefore giving a deeper insight into the concept of knowledge and eliminating the ambiguity of the terms:

Table 1. Information vs. Knowledge

Information	**Knowledge**
Static	Dynamic
Independent of the individual	Dependent on the individual
Explicit	Tacit
Digital	Analogue
Easy to duplicate	Must be re-create
Easy to broadcast	Face-to-face mainly
No intrinsic meaning	Meaning has to be personally assigned

Note: source: Sveiby, 1997.

Although knowledge is a very abstract phenomenon, it has unique properties which have to be taken into consideration while thinking of it as of a competitive advantage (Sveiby, 1997):

- Knowledge is dynamic, and its values may transform over time, so it is important to keep the knowledge up-to-date and to maintain it;
- Knowledge facilitates better learning and results;
- Knowledge is created and developed through learning;
- Technology promotes better knowledge creation, transfer, utilization and distribution;

- Knowledge relies on experience and memory;
- Knowledge depends on the context;
- Knowledge is reusable

Ilkka Virtanen in his academic dissertation *"How tacit is tacit knowledge? Polanyi's theory of knowledge and its application in knowledge management theories"* explains that the owner of the highest quality knowledge has the highest chance to show the best results (2014). *"Hence, the possession of the most resources does not guarantee success, but the most effective use of available resources"* - knowledge utilization is the key to success, and it needs a proper approach (2014, p.13). Author mentions that such a way of thinking gained popularity in the organizational context in early 1990's and, since then, knowledge has been seen as "the key asset leading to economic progress, competitive advantage and business success in organizations" (2014, p.13).

Being a complex concept, knowledge could be interpreted in different ways, as well as there are several theories of knowledge which exist nowadays. Knowledge is undoubtedly a multi-faceted concept - Von Krogh and Venzin have suggested seven categories of knowledge applied in the organizational theory: tacit, embodied, encoded, embrained, embedded, event and procedural which are widely used in the academic world (Mertins, Heisig & Vorbeck, 2001; Von Krogh, Venzin, 1995). The concepts of tacit and explicit knowledge will be introduced in the following section.

In this master's thesis knowledge will be regarded as a means for competitiveness; the main question is: how knowledge-sharing behavior is reinforced by the openness and trust in the company, support from the top management and reward systems within the knowledge management field? The list of the knowledge sharing factors described in this thesis is limited due to the specification of the research, however it could be further complemented and expanded by other practitioners.

2.3. SECI model: tacit and explicit types of knowledge

One of the most famous models which describes the organizational knowledge processes was developed and presented by Ikujiro Nonaka and Hirotaka Takeuchi (1995) in the book "The Knowledge-creating Company". According to Nonaka and Takeuchi there are two types of knowledge: tacit and explicit knowledge. Tacit knowledge is described as a subjective, context specific knowledge which is based on experience and, therefore, it is impossible to express it verbally (words, sentences, numbers). The term "tacit knowledge" belongs to Michael Polanyi (1958) and it explains the nature of the knowledge which cannot be transmitted through the verbal means and it can only be detected and evolved via practice. Tacit knowledge is represented by the ability to speak languages, to cook or by different ideas, skills and experiences which cannot be easily decoded and expressed. Explicit knowledge, on the contrary, is an objective knowledge which can be articulated through the verbal means, moreover, it can be classified, stored and shared between the individuals and organizations. Explicit knowledge is context free, rational, easy to code and it can be represented by databases, manuals or via problem solving.

In order to understand the processes behind the knowledge sharing, it is important to analyze its core processes. The SECI (Socialization, Externalization, Combination, Internalization) model developed by Nonaka and Takeuchi in 1995 is a cycle model which describes four modes of tacit and explicit knowledge conversion. A model works as a spiral when it's seen as a continuous learning process because the creation of the knowledge is a dynamic process which demands a binding interaction and cooperation between the both tacit and explicit knowledge (see Figure 2).

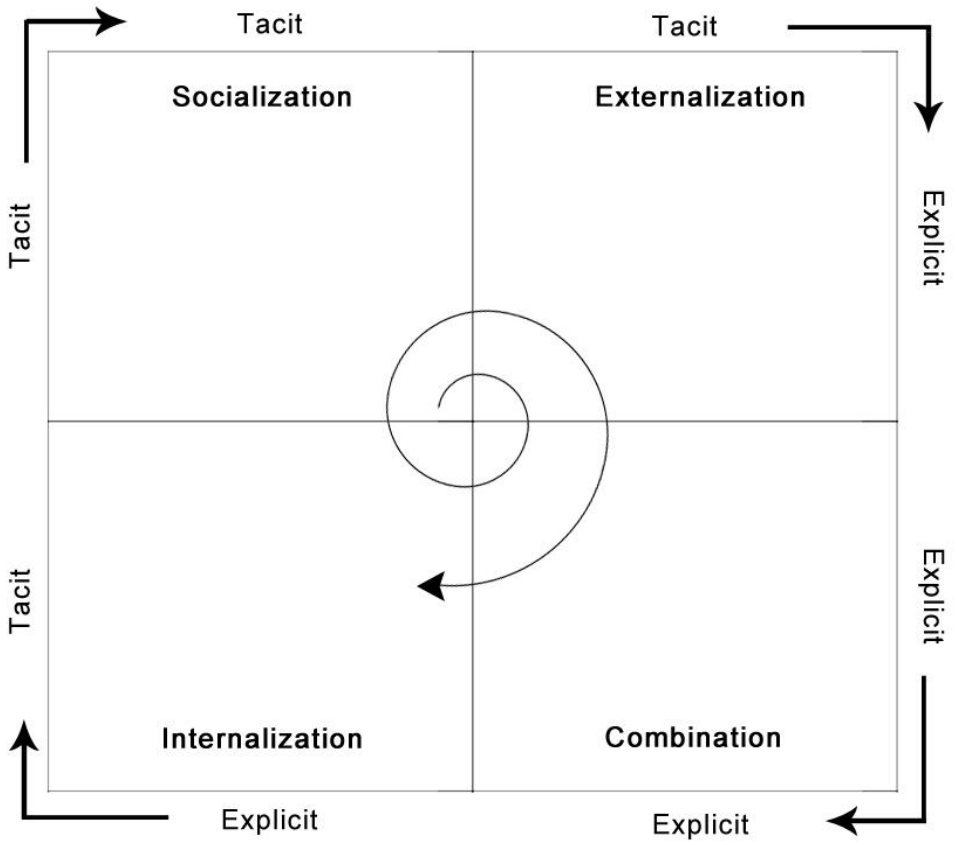

Figure 2: SECI model developed

Note: source: Nonaka (1994), Nonaka et al. (1994), Nonaka & Takeuchi (1995), Nonaka et al. (2000), (2001a), Nonaka & Toyama (2003).

The first process is called socialization and it converts the tacit knowledge of one person into the tacit knowledge of another person. It is a non-verbal knowledge transfer which involves a direct interaction between people within an organization. It can be capturing knowledge through communication with the people inside or outside an organization. Another process is called externalization, which means converting tacit knowledge into explicit knowledge. Such a process is based on the dialogue and it is demonstrated either by expressing one's ideas and experiences in words or by «translating» tacit knowledge into a form that the others are able to understand, therefore, people transmit their way of thinking through ideas' interexchange. As soon as the knowledge becomes explicit, it is converted into another explicit knowledge through the process of combination. According to Nonaka, the knowledge is mostly transferred with the help of information technologies during this

process. The coded knowledge is conveyed from one person to another in the databases, books, different documents or emails, thus, enabling the knowledge transfer between the groups and organizations. The last process in the SECI model is called internalization and it is the way explicit knowledge is converted into tacit, which is performed by the individuals. In other words, internalization is the process of embodying the explicit knowledge into the tacit knowledge (Nonaka & Takeuchi, 1995) being conveyed through the actual doing and is transferred from a group to an individual.

The SECI model is based on the communication both on the individual and group levels and it emphasizes the knowledge sharing which is an important tool in any organization's working process. As the human resource still has not been replaced completely, it is valued in the form of knowledge – either tacit or explicit, although the latter is easier to access and to share. According to Nonaka, true knowledge is an actionable understanding which requires to share emotions, experiences and feelings and, therefore, it expects to have a certain level of a personal commitment. The working conditions and organization's environment should be satisfactory in order to provide the high responsiveness within an organization and the fast knowledge transfer being prepossessing and attractive for the employees. Trust and cooperation also contribute to the knowledge transformation, because cooperation is able to erase the boundaries and it tends to lead to a dialogue. The interaction between employees encourages the learning process among individuals and, therefore, it increases the amount of knowledge workers inside an organization.

All the mentioned above described processes are mostly based on the interaction between the individuals and this is where problems may occur. The SECI theory works only when people do transmit the knowledge. However, the model can be criticized in case if the individuals are not able or willing to interact at a certain level and it may become a real obstacle for the knowledge-oriented company.

2.4. Knowledge economy

The term "knowledge economy" was first introduced by Peter Drucker in 1969 in his book "The Age of Discontinuity". Assuming that humanity was moving "from an economy of goods [to] ... a knowledge economy", the idea of a knowledge-driven society was formed (Drucker, 1969). Such factors as an exponential growth of the knowledge-intensive production, the usage of an innovative approach in many fields of economy, the intellectual property protection and the diversification of services demonstrate the entrenched position of the knowledge economy around the world. Moreover, an integration of the knowledge management among the enterprises and its dissemination is crucial for maintaining organizational competitiveness and productivity.

To begin with, it is essential to distinguish the knowledge economy from the traditional economy. According to Gluzitsky (2017), there are three main differences between the two types:

- **Goals:** while the traditional economy focuses on the profit growth of the invested capital, the knowledge economy aims at shaping a creative individual;

- **Means of production:** the traditional economy exploits all the available resources (nature, human resources, IT). However, within the knowledge economy, the efforts are made in order to have the most effective use and creation of the new knowledge in symbiosis with people and nature;

- **Results:** the traditional economy promotes the creation of a society based on personal gain and selfish interest, leading to its stratification and, moreover, causing wars, terrorism, corruption and spreading poverty. Such an economy subordinates to the tasks of human development. However, ideally, the knowledge economy eliminates the principle of unfair wealth distribution, it eliminates the mercenary interest dominance in the capitalist economy. Furthermore, it reduces the chances of international and local crises occurring.

Within the organizational context, a company is able to anticipate the moments of necessary qualitative transitions, to organize, implement and control them, to control chaotic manifestations caused by technological leaps in order to stabilize the system, to eliminate the effects of negative random factors, etc by solely focusing on the knowledge (Gluzitskiy, 2017).

As it was mentioned before (see 2.1. Definition of Knowledge), a distinction between the information and the knowledge should be emphasized: "information becomes knowledge only when it is purposefully used by an individual or collective. In other words, to become knowledge, information must be meaningful and contextualized in a particular social and cultural environment" (Gluzitskiy, 2017, p.101). He also highlights characteristics of the knowledge-based economy:

- the concept of knowledge serves as a resource – knowledge becomes a key growth factor alongside with the labor and capital;
- the concept of knowledge serves as a product – creation and production of knowledge determines the image of the modern economy;
- the concept of codified knowledge – it is a key component of the economic relations;
- the knowledge is based on the development of the information and communication technologies (ICT) – the knowledge economy is a result of the information society's heyday (Gluzitskiy, 2017)

Regarding the effect of scale, in a traditional economy, an increase in the scale of production leads to a production costs decrease; however, the costs of complex production processes increase. Therefore, the optimal size of an enterprise is set. On the contrary, the knowledge economy defines the other conditions: the more knowledge is used, the higher the efficiency of the organization is; thus, it creates more opportunities for the growth of the intellectualization of production processes (Gluzitskiy, 2017). The economies of scale in a knowledge economy are characterized by increasing marginal utility and increased productivity. Moreover, the competitiveness of an enterprise correlates with the knowledge management – the shorter the time interval between the conceiving of an idea (personal

knowledge) and its materialization, the more efficiently the knowledge management is applied in this enterprise, thus, the better the human potential of the enterprise is implemented.

Technological progress inevitably releases labor from the manufacturing sector. It leads to the labor transition from the area of tangible production to the intangible area. As a result, "living labor" is saved by the development of the production forces, resulting in the social wealth growth, higher living standards, leisure time increase, promoting personal growth. A society is not burdened with physical labor, it is focused on the generation of new ideas and knowledge creation instead. Such a trend is demonstrated by the fast growth of investment into the knowledge: in the countries – members of the Organization for Economic Cooperation and Development (OECD) – an average of 3.4% per year against 2.2% (fixed assets) (Gluzitskiy, 2017; Pogorelova, 2011).

According to Morkovkin (2013), the key prerequisites for the formation and development of the knowledge economy are:

- Knowledge transformation into the production factor along with the capital, labor and natural resources;
- Increasing proportion of the services and fast growth of the intellectually intensive services for businesses;
- High importance of the education investments and human capital; high-qualified personnel training;
- Development and the large-scale use of new information and communication technologies;
- Transformation of the innovation into the main source of the economic growth;
- Reinforcing the competitiveness of the enterprises, regions and national economies

However, despite being a common good, knowledge is becoming a powerful marketing instrument. "The knowledge economy is market-driven and performs according to a market ideology, which stands in a problematic but not necessarily conflicting relation to the norms and ideals of the knowledge society" (Sörlin & Vessuri, 2007, p. 2). According to Sörlin and

Vessuri, there are several discrepancies and certain contradictions regarding the "knowledge economy" and "knowledge society". While globalization processes reveal the need for the intellectual resources, knowledge-intensive concepts and skilled labor, the polar perceptions of the knowledge are still "being embedded in an extremely complex reality" (Sörlin & Vessuri, 2007).

2.5. Knowledge management

Nowadays, in the era of modern technologies, it is impossible to imagine an organization which is not willing to strive for the self-development and for raising its own competitiveness. The pace of the modern business world dictates the new rules and creates a specific knowledge-intensive environment where being successful equals to being able to manage the existing knowledge.

The concept of knowledge in the organizations has attracted attention across the academic literature for several decades, therefore the concept is known for the academics (Alvesson & Karreman, 2001; Nahapiet & Ghoshal, 1998; Spender & Grant, 1996). According to Ipe (2003), knowledge as an inherent organizational factor has also been considered as a main source of competitive advantage (Stewart, 1997) and "critical to the long-term sustainability and success of organizations"(Nonaka & Takeuchi, 1995). Thanks to the knowledge recognition in the modern organizations – it promotes the creation, sharing and utilization of knowledge on both individual and collective levels (Becerra-Fernandez & Sabherwal, 2001; Drucker, 1993, as cited in Ipe, 2003).

Knowledge management (KM) has become a popular practice due to the necessity of the knowledge workers to share and to convey their embedded skills or experiences. Therefore, the employees own a great internal potential which needs to be revealed in the most efficient way. The concept of the knowledge management may be viewed from the different perspectives. KM is a multidisciplinary subject which covers a broad diversity of fields. According to Alvesson and Karreman (2001), knowledge management is an umbrella term for a broad spectrum of fields: information systems, organizational learning and strategic management and innovation. Although this concept is appealing and seems significant on

the broad scale, it is, however, quite often it is diffuse and ambiguous in terms of classification. Thus, troubles with sticking to one specific category of "knowledge" or "management" lead to the following paradox – "the more management, the less knowledge "to manage", and the more "knowledge matters, the less space there is for management to make a difference" (Alvesson and Karreman, 2001, p. 996). Undoubtedly, knowledge management is a valuable tool of guiding the intellectual capital in every company.

According to Dalkir (2001), knowledge management was initially defined as the process of applying a systematic approach to the capture, structuring, management, and dissemination of knowledge throughout an organization to work faster, reuse best practices, and reduce costly rework from project to project (Nonaka & Takeuchi, 1995; Pasternack & Viscio 1998; Pfeffer & Sutton, 1999; Ruggles & Holtshouse, 1999).

Knowledge management is also known as a systematic, goal-oriented application of measures to steer and control the tangible and intangible knowledge assets of organizations. Knowledge management aims to use the existing knowledge inside and outside of the organizations to enable the creation of new knowledge, and generate value, innovation and improvement out of it (Wunram, 2000). Knowing how to organize the knowledge flow, an organization can improve the quality of solutions generated, increase the general productivity and enlarge the amount of the fields of practice. In addition, the unique feature of knowledge as a resource means that it can become obsolete in the future. Therefore, new knowledge has to be created continuously (Ichijo & Nonaka, 2006). However, it is important to control the quality of knowledge and information acquired and disseminated within the organizations. Knowledge has to be relevant - not all kinds of knowledge might be applicable and useful for the company. All circulating data has to be accurate, relevant and preferably recent in order to stay competitive. Furthermore, companies need to educate the top management and KM executives on how to manage knowledge strategically in order to achieve positive results. It is essential for the managers to be encouraged to share their knowledge in an effective way and implement ad hoc methods for the better knowledge conversion within the company.

Knowledge management represents a deliberate and systematic approach to ensure the full utilization of the organization's knowledge base, coupled with the potential of individual skills, competencies, thoughts, innovations, and ideas to create a more efficient and effective organization (Dalkir 2011). The companies tend to focus more on the intellectual capital which contributes to the business growth as it represents a valuable asset. Such competencies and expertise in various fields bring intangible profit to an organization which resides in its personnel and can be retrieved through the various practices. It is essential to identify the knowledge that is of value and is also at risk of being lost to the organization, through retirement, turnover, and competition using the intellectual capital or asset approach (Dalkir, 2011). In other words, in order to manipulate and elaborate the knowledge management techniques, it is vital to define the existing knowledge which a company owns or needs and to create an environment which is directed at stimulating the knowledge flow and knowledge retention within a certain organization.

2.6. Knowledge sharing

"We experience work as a human, social activity that engages the same social needs and responses as the other parts of our lives: the need for connection and cooperation, support and trust, a sense of belonging, fairness, and recognition" (Cohen & Prusak, 2001, p. x). We all receive everyday information through the knowledge sharing practices: morning news, chat with a friend, workshop at the office or an evening cooking course – we expand our knowledge day by day. Thus, the ultimate goal of the knowledge sharing is an asset accumulation. Consciously or unconsciously people get involved in the knowledge sharing process in all spheres of their lives.

This master's thesis focuses on the organizational knowledge sharing – how knowledge is created and transmitted among employees inside a firm or a company. Companies can be seen as social communities which are creating, sharing and transferring explicit and tacit knowledge (Chow & Chan, 2008). Thus, motivational aspect (incentive rewards, trust, relationships of behavior regarding socio-cognitive approaches plays an important role in promoting knowledge sharing in a company.

Several studies based on the theory of reasoned action (TRA) showed that volition and leadership affect the success of an organization (Chow & Chan, 2008). The theory of reasoned action is a social psychology model which illustrates and explains the links between human beliefs, norms, intentions, behaviors and attitudes (Fishbein & Ajzen, 1975). According to Fishbein and Ajzen, TRA suggests that the human behavior is mediated by the attitude an individual develops based on the intention to engage in the certain behavior (Chow & Chan, 2008; Fishbein & Ajzen, 1975). Moreover, an individual is more likely to perform the behavior if the subjective norm is higher. Also, individual is more likely to perform a behavior if the intention to engage in it is strong (Chow & Chan, 2008; Fishbein & Ajzen, 1975). TRA is often used to identify differences in the knowledge-sharing behavior – a study by Bock and Kim revealed that the attitude towards the knowledge sharing and subjective norms positively affects the knowledge-sharing behavior (Norfadzilah, Faizuniah, Md Lazim, Noor & Nini, 2016).

Moreover, an impetus towards the organizational knowledge sharing can be communicated through the extrinsic rewards, anticipated reciprocal relationships, a sense of self-worth, and a favorable organizational climate (Chow & Chan, 2008). Wong, Wong, Hui & Law (2001) claim that organizational knowledge is generated provided that the long-term positive relationship between employees is established (as cited in Chow & Chan, 2008).

In his book *Knowledge Sharing,* Smith (2005) mentions the importance of the networks in the workplace – dynamic interaction promotes the new business approaches, adds agility to the organizational flow, therefore, organizations become more customer-oriented and are able to meet the needs of their clients, more efficiently utilizing information and knowledge management (Stewart, 2001 as cited in Smith, 2005).

Another aspect which defines the knowledge sharing in organizations is collaboration – in the knowledge intensive firms, collaboration is taken into consideration, yet, it has to be well-managed in order to add and to create more value to the company (Smith, 2005). Furthermore, according to Bob Buckman (2004), the concepts of cooperation and collaboration should be distinguished– the former means to work together in an enjoyable way, whereas collaboration is related to empathy (as cited in Smith, 2005).

2.7. Knowledge sharing and its impact on the firm's competitiveness

Ubiquitous knowledge management referencing in the context of business environment and organizational culture creates an assumption that companies can increase their competitive advantage by managing their knowledge (Schiuma, Andreeva & Kianto, 2012). While this subject has been topical for already several decades, the gap in the research whether the knowledge sharing truly makes an impact on the organizational performance still exists (Schiuma, Andreeva & Kianto, 2012). Although several empirical studies (Darroch, 2005; Gloet & Terziovski 2004; Kianto, 2011; Lee & Choi, 2003; Marque´s & Simo´n, 2006; Tanriverdi, 2005; Zack et al, 2009, as cited in Schiuma, Andreeva & Kianto, 2012) indicate that the knowledge management somehow influences a company's performance, there is still no consensus in the literature regarding its direct or indirect (mediated by specific variables) effect on the competitiveness level.

According to Schiuma, Andreeva and Kianto (2012), there is no single interpretation and measurement of the performance itself across the existing studies: it varies from the innovativeness (Darroch and McNaughton, 2003; Gloet and Terziovski, 2004; Kianto, 2011; Kiessling et al, 2009;) with employee and product improvement (Kiessling et al., 2009) to the product leadership, customer intimacy and operational excellence (Zack et al., 2009) and competitive position (Lee and Choi, 2003, as cited in Schiuma, Andreeva & Kianto, 2012). However, several studies have reflected the financial side of the knowledge sharing (Darroch, 2005; Marque´s and Simo´n, 2006; Tanriverdi, 2005; Zack et al., 2009, as cited in Schiuma, Andreeva & Kianto, 2012). Moreover, the focus on the knowledge processes prevails over the knowledge management practices (Schiuma, Andreeva & Kianto, 2012). Thus, there is a lack of information for the managers regarding the ways of improving company's performance via more efficient knowledge management methods. Mixing the knowledge processes and the knowledge management practices prevents practitioners from obtaining relevant data on the organizational knowledge flow, hence, calling for more research in the KM field (Foss et al., 2010). In line with this argument, the emerging knowledge governance approach highlights the lack of studies about the formal organization from the KM perspective and requires deeper understanding of this field (Darroch, 2005; Foss et al., 2010; Zack et al., 2009, as cited in Schiuma, Andreeva & Kianto, 2012).

The study of Schiuma, Andreeva & Kianto (2012) intends to bridge the gap between KM practices and their impact on firms' competitiveness and financial performance. The study was conducted based on collected data from 3 different countries: Russia, Finland and China. The selected companies represented production, service and industrial sectors with different growth rates. The results of the study have revealed that KM really affects the firm's performance, acknowledging theoretical assumptions about the importance of KM for competitiveness of firms (e.g. Davenport and Prusak, 1998; Edvinsson and Malone, 1997; Nonaka and Takeuchi, 1995, as cited in Schiuma, Andreeva & Kianto, 2012).

The link between company's success and its competitive advantage was mentioned by Carneiro (2000) – knowledge on customers' attitudes, competitor's analysis (e.g. weaknesses, strengths and movements of firm's direct competitors) (Curren et al., 1992, as cited in Carneiro, 2000) and product perception on the market may promote higher performance. Therefore, organizations should take advantage of the innovation, IT, competitor's failure analysis, and they should also invest into the knowledge management systems and knowledge-driven workforce (Carneiro, 2000). Effective managers have to perceive KM as a strategic tool – not only does it create opportunities for the new solutions, but it also helps to formulate alternative business strategies (Carneiro, 2000). Moreover, top management should maintain organizational learning through the organizational learning systems 'creation (Coopey, 1995; Sinkula, 1994; Senge, 1990, as cited in Carneiro, 2000). Being actively involved into the learning process, workers are more likely to generate new knowledge which can potentially increase competitive advantage of the business.

Chapter 3: Conceptualization of Knowledge Sharing in the Russian context

3.1. Emerging economy of Russia

"Emerging economies are low-income, rapid-growth countries using economic liberalization as their primary engine of growth. They fall into two groups: developing countries in Asia, Latin America, Africa, and the Middle East and transition economies in the former Soviet Union and China" (Looney 2014, Foreword, xxxv). Looney (2015, p. 3) says " these countries (Brazil, Russia, India and China) appeared to have the best prospects in the developing world for high sustained rates of growth". The choice of Russia as a focus country is due to the recent shift towards the more liberal, more open economy and market-friendly path. As an emerging economy and part of the BRIC association, Russia has recently been showing economic development forming a platform for the cultivation of the modern, Western-oriented management style (Looney 2014; O'Neil, 2011). Moreover, having a large population combined with the cheap labor market leads to the increasing untapped potential. However, Hanson (as cited in Looney 2014, p. 4) claims that Russia is being atypical emerging economy, "upper-middle-income country with many of the attributes of modernity with deep-seated economic problems as well". The prevalent resource scarcity combined with the cultural specificity and a long-term economic isolation had an impact on the socio-cultural status quo. Therefore, Russia has a unique scenario of implementing innovation in terms of organizational management. Furthermore, the gradual change of the vector of the Russian economy allowed to focus on the innovation, involving more of the intellectual resources, emerging new types of management (Vertakova & Plotnikov, 2016).

The growing political, economic, social and environmental instability in the world indicates that in the upcoming decades the companies will be focusing more on the knowledge which can stimulate the development of the human society (Gluzitskiy, 2017). Moreover, based on the current globalization of socio-economic development, prosperity and power of the nation could be determined by the level of knowledge owned and used (Gluzitskiy, 2017).

According to the World Bank Report (2017), the estimated total wealth distribution in Russia looks as following: human capital – 46%; produced capital – 33%; natural capital – 20% (of which 15% are non-renewable sources, 5% are renewable) and net foreign assets – 1% (Sanghi, Lange, Esther, Emelyanova, Nemova & Rostovtseva, 2017). Thus, human capital accounts for the largest share of wealth in Russia. In comparison, in the OECD countries human capital accounts for 70% of the total wealth structure. Between 2000 and 2017, Russia's human capital wealth per capita grew rapidly at 80%, compared to the overall wealth per capita growth of 76% but during the past ten years this growth has slowed down. More precisely, it slowed from 4.7% during 2000–2010 to 1.8% during 2010-2017. If human capital rate grew at its 2000–2017 average of 3.5%, it would still take about 50 years to reach the OECD countries' level and the rate of 1.8 % would take Russia around 100 years to reach the OECD level (Sanghi et al, 2017). An interesting fact illustrated in the World Bank Report: although the share of human capital in Russia's total wealth is significantly lower than in the OECD countries, the education indicators in Russia appear to show the same or even a higher level than the indicators in OECD countries (Sanghi et al, 2017). Moreover, the share of the workforce with higher education in Russia is greater than in the OECD countries, however the quality of education, measured using the standard tests, corresponds with the OECD level.

Generally, the human capital in Russia is highly affected by the insufficient federal funding. Pointing out the draft budget for the 2020-2022, the economists from the Higher School of Economics (Moscow), RANEPA, the Institute of the Economic Policy named after N.I. Gaidar and the Financial University under the Government of the Russian Federation state that the share of the budget expenditures on education will decrease from 3.8% of GDP in 2020 to 3.6% in 2022, and health care expenditures will account for 3.6% of GDP in 2020 and 3.4% - in 2022 (Sanghi et al, 2017). Such an unpromising forecast leads to the conclusion that the uneven economic development, poor financing of education, health care system and infrastructure, and unequal distribution of resources are the great counter-factors affecting the KM. The World Bank suggests the following measures in order to increase the share and the returns on the stock of the human capital in Russia:

- to expand the university education potential;
- to improve the quality of the Russian system of vocational;

- to improve the students'soft skills – collective problem solving, communication competencies and creativity;
- to improve the role of the primary health care including diagnosis, prevention and disease management in order to decrease the expensive treatment needed at later stages;
- to improve efficiency and to increase the healthcare funding through the treatment protocols implementation based on the evidence-based medicine principles and quality control systems; to optimize the hospital excess infrastructure and to increase the more active usage of information technology (Sanghi et al, 2017)

According to Ershova and Androsova (2014) the strategy of the innovative development of Russia until 2020 implies a transition from a raw material to a knowledgeable (innovative) economy which is formed by the intellectual property market, innovative systems and innovative personnel. It is crucial to constantly implement the innovative products and the use of knowledge in the activities of an enterprise.

As companies see the untapped potential in their employees, they need to facilitate continuous learning and knowledge sharing among their staff. Knowledge as a single whole is being embedded in every single employee, thus, in order to use this potential, managers should be educated in the knowledge management field. Such skills allow to extract, apply and transfer the knowledge. Furthermore, providing an open work environment and space for communication, companies contribute to the further learning initiatives, creativity and work-related problem solving based on skills, experiences and abilities of their personnel. Such positive outcomes support the development of the knowledge management in the enterprises. However, despite the positive dynamics of the knowledge management usage in big corporations, there are various obstacles that hinder the implementation of the knowledge management in smaller organizations in Russia (Ershova & Androsova, 2014).

One of the ways to receive the information regarding the KM performance in the organization is to conduct an empirical research among the employees of a certain company.

As an example, a questionnaire was conducted in the Russian consulting company by its quality manager Balashov E. in 2013 (Ershova & Androsova, 2014). The research has indicated the existence of the issues regarding the implementation of the knowledge management systems. The study has showed that 60% of respondents consider the lack of time to implement the knowledge management as the main obstacle, 46% note a lack of understanding of the role of the knowledge management by the organization's top management; 45% of the respondents gave preference to an individual work as compared to a teamwork (Figure 3). Summarizing the identified obstacles towards the implementation of the knowledge management in the Russian companies, it is easy to highlight the main problem – the lack of the top management conviction and, as a result, the lack of understanding the role of the knowledge management in the overall organizational strategy (Ershova & Androsova, 2014).

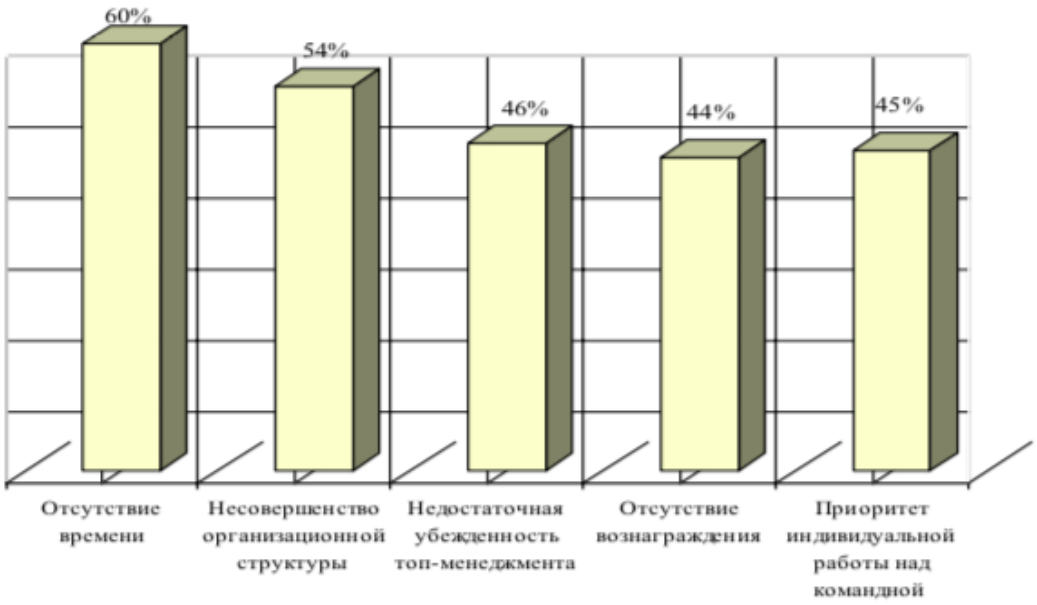

Figure 3: Obstacles in the implementation of knowledge management in Russian companies

Note: 60% – lack of time; 54% – organizational structure imperfection; 46% – lack of credibility of top management; 44% – lack of reward; 45% – individual work priority over teamwork.

From an organizational point of view, Russian organizational culture tends to highly resemble Eastern European culture, however, being an antipode to Scandinavian culture (Jarjabka, 2014). Based on the research done by GLOBE, Hofstede, Trompenaars and

Hampden-Turner, Jarjabka (2014) provides a comparative analysis of the organizational culture of Central and Eastern European countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Russia, Serbia, Slovakia and Slovenia). A Hofstede Model, which uses five cultural dimensions to differentiate the four different organizational cultures (Hofstede 1980, 1991, 1998) allows to discover several cultural differences and similarities among Central and Eastern European countries (Jarjabka, 2014). Speaking about Russia, a high Bulgarian-Romanian-Russian cultural similarity is presented in the research.

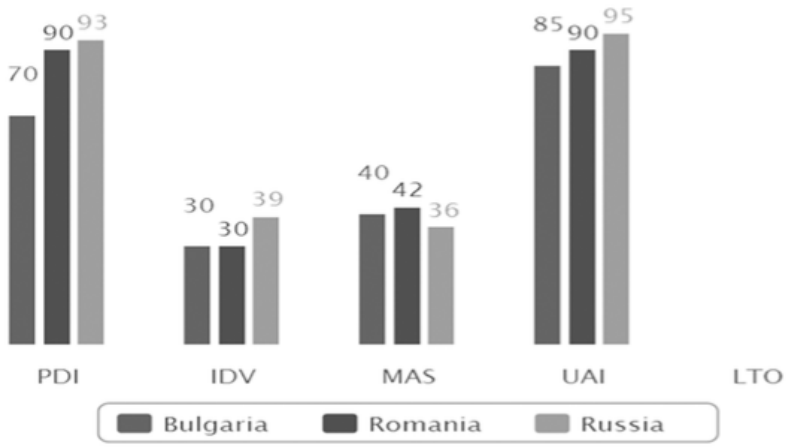

Figure 4. Comparison of the national-organizational cultural dimension indices of Bulgaria, Romania and Russia

Note: source: The Hofstede Centre 2009, as cited in Jarjabka, 2014.

The relatively identical indices of the power distance, individualism-collectivism, masculinity-femininity and uncertainty avoidance mark that these cultures show a great resemblance. It can be explained from the geographical point of view as well as through historical roots – Greek - Eastern Orthodox religion (Taylor, 2003, as cited in Jarjabka, 2014).

However, the study revealed Estonian-Finnish similarity and Estonian-Russian differences (Figure 5). Estonian cultural indices appear to be closer to the Finnish cultural indices than the Russian ones (Maaja, 2004, as cited in Jarjabka 2014). This is due to the Scandinavian

"value system" – cultural connection is not only accounted for the geographical reasons, but it is also supported by Hofstede's dimension model: Estonia belongs to the "sensitive cultural cluster" alongside with Norway, Denmark, Sweden and Finland (Jarjabka, 2003; Jarjabka, 2014). The following culture group is described as being sensitive in terms their national and organizational behavior and quite low power distance. "Despite spending several decades as one country with Russia, despite all attempts of assimilation, and despite the Russian minority residing in the area, not the slightest bit of similarity can be seen among the Russian and Estonian culture" (Jarjabka, 2014). Furthermore, Jarjabka reminds that all post-socialist countries should not be attributed to the same group without a proper research.

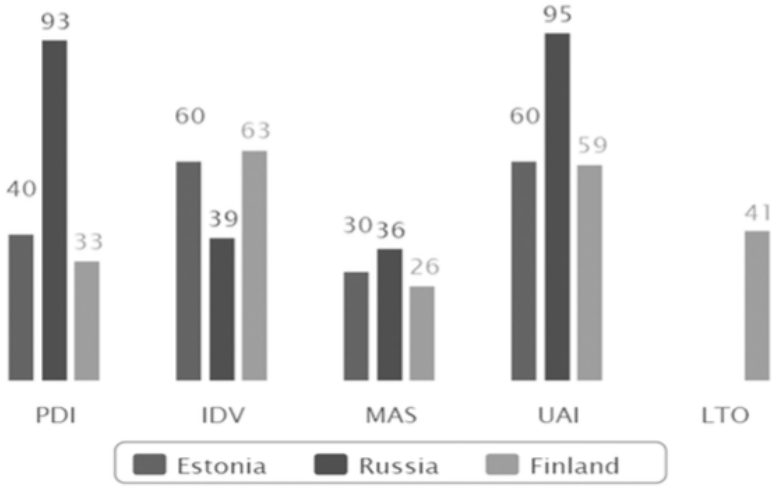

Figure 5. Comparison of the dimension indices of Estonian, Finnish and Russian culture

Note: source: The Hofstede Centre 2009, as cited in Jarjabka, 2014.

3.2. Knowledge management in Russia

All these mentioned above inhibitory factors have a direct impact on the general management style in the organizations in Russia. Speaking about a modern management, many researches emphasize the importance of the human resources, since it is the person who has the principal role in the sustainable development of an organization. In other words, human capital is a central element of any management processes (Vertakova & Plotnikov, 2016). As a consequence, knowledge shared between individuals becomes one of the most important assets, therefore, it leads to a competitive advantage.

Russian scientists A.L. Gaponenko and T. M. Orlova (2008) have identified seven basic knowledge management strategies, which depend on certain elements of the intellectual capital (client, human, or structural) the company focuses on:

1) the creation and use of knowledge within the framework of human capital (to answer the questions: “How do employees exchange the knowledge within an organization?”, “To which extent does their competence increase and how is it used in relation to the competitiveness' growth of an organization?”);

2) the creation and use of knowledge within the framework of organizational capital (focus on explicit knowledge, such as patents, copyrights, databases, etc.);

3) the creation and use of knowledge in the external relations of the company, primarily with the customers (based on the marketing technologies);

4) interaction between the human and the client capital (improving the individual expertise of employees through the interaction with clients);

5) interaction between the structural and the human capital (to answer the question: “How does the individual expertise of personnel contribute to the elements' formation in relation to the internal structure of an organization?", "How can individual expertise be improved through the usage of the internal structure elements?”)

6) focus on the knowledge transfer from the interaction with the external counterparties of an organization to the internal systems and ensuring its intensive usage between employees;

7) the knowledge flow between all elements of the intellectual capital.

Thus, knowledge management is one of the main tools for ensuring the strategic competitiveness of an organization. In order to effectively implement this concept, an

integrated approach is essential to provide the activation of all basic management functions (planning, organization, motivation and control). These functions will help to eliminate the current obstacles and contradictions regarding the knowledge management, and they will contribute to a long-term sustainable development of the individual economic entities and also of the economy in general (Kharitonova, 2013).

Polyanin (2016) highlights several features of the current organizational management in Russia: high scientific potential, originality of organizational culture, technological management approach, traditions of the economic governance by the state and complex regional and political aspects. Moreover, he claims that Russian managers suffer from their wrong authority delegation to the employees, and therefore it aggravates the workflow. The lack of attention to the corporate culture also has an impact on the internal knowledge sharing processes. Furthermore, the deficit of the ICT and low technological literacy in Russian companies indicates the inability to conduct successful information acquisition and thus, the knowledge sharing inside the company. However, the modern rapid development of ICT has affected the socio-psychological component of the knowledge management. The transition from the internal communication between employees to the usage of various messengers and other software lead to the fact that, the on-site activities have been replaced by virtual ones (Vertakova & Plotnikov, 2016).

According to Larionov (2017), the knowledge-based economy is the natural result of the scientific and technological progress which is conducive to the growth of the role of the knowledge and information in creating "wealth". The main features of the knowledge-based economy are:

- knowledge is the production factor;
- information is the key resource;
- the main component of the competitive advantage is creativeness and intellectual ability of a person;
- the percentage of the knowledge workers is increasing among the workforce;
- all activities in the organizations are held based on the continuous knowledge sharing

Thus, the knowledge and information resources are highly valued professionally wise, as well as the ability to manage them. The proper knowledge management is one of the keyways to succeed in a business perspective as it is a source of intellectual capital in every company.

3.3. Knowledge sharing in Russia

In the knowledge economy, organizational knowledge exchange between a group of employees is a key to the effective joint activities and problem solving. It is based on a set of individual, group and corporate ideas about the company and employees, on their collective collaboration, originating from the company background and its history (Hodgkinson & Sparrow, 2007; Smalla & Sage, 2006, as cited in Nestik, 2014).

According to Kasavin (2001), knowledge is not only a setting of experience in social memory or a transformation of experience into awareness through its structuring, but it is also a method of transforming awareness, endowing new meaning to performance and communication (Nestik, 2014). Moreover, as knowledge has a social nature, it is represented by the socially significant processes and entities. (Zhuravlev & Nestik, 2010a, 2010b, 2011, 2012, as cited in Nestik, 2014).

Nestik (2014) suggests that there are several groups of psychological factors of knowledge sharing in the organizations: individual and socio-psychological factors of person, interpersonal, group, intergroup and societal. Individual psychological factors, states Nestik (2014), can influence the knowledge generation and its transfer. It is the employees, who affect the knowledge generation process through their various interests, willingness to solve complex problems, low uncertainty avoidance, risk tendency, persistency and self-confidence (Oldham & Cummings, 1996, as cited in Nestik, 2014), openness to new experience (King, 1996; McCrae, 1987, as cited in Nestik, 2014). Personal qualities and learning styles are also important in terms of organizational knowledge sharing (Armstrong & Mahmud, 2004, as cited in Nestik, 2014).

According to Nestik (2014), there have been conducted several domestic (in Russia) and foreign studies which have thrown the light on the following socio-psychological (personal)

factors of the organizational knowledge sharing: self-efficacy, machiavellianism, value orientations, level of basic trust and strength of organizational identity (Cabrera, 2006; Gagné, 2009; He, Fang & Wei , 2009; Kuo & Young, 2008; Liu, 2008; Nestik, 2009; Zhuravlev, 2010; Zhuravlev & Nestik, 2010a, 2010b, 2011). The studies he has conducted showed the relationship between the knowledge exchange readiness and the individual value orientations (goodwill, universalism, achievement, conformance and independence). Furthermore, the results have also confirmed the relation with the emotional intelligence, the individual perception of a person's own past, basic trust in people and organizational identity (Nestik, 2009).

Speaking about the interpersonal factors of the knowledge management effectiveness, Nestik (2014) claims that there is no sufficient research in relation with it. However, these factors include the level of interpersonal trust, the degree of employees' awareness of each other's knowledge, the intensity of contacts, common views and experience (Cross & Parker, 2006; Kilduff & Krackhardt, 2008; Zhuravlev, Nestik & Nikitenko, 2009 as cited in Nestik, 2014).

The group factors of the knowledge sharing comprise the level of trust in the team, the level of a group reflexivity, the top management attitude towards the knowledge sharing, the team attitude towards the implementation of the knowledge management system, characteristics of the communicative group structure, the group identity strength and organization's commitment (Kuo & Young, 2008; ; Liu, 2008; Maurer, Bartsch & Ebers, 2011; Nestik et al, 2009; Nestik, 2012, as cited in Nestik, 2014).

3.3.1. Knowledge sharing models in organizations in Russia

Nestik (2014) suggests that there are two knowledge sharing models which could be found in Russian organizations: codification-oriented and personalization-oriented models.

The *codification* strategy is based on the intellectual capital accumulation within an organization: a company uses IT for the data retrieval tools integration and it provides the maintenance of the electronic knowledge databases. The advantage of such a strategy is the "economies of scale" achievement through the knowledge "recycling" in large organizations

with vertical hierarchy. Such an approach leads to the innovation and creativity decrease; however, it proves to be more reliable in terms of experience of the antecedent problem solutions.

Codification is an investment-oriented strategy – companies have to invest into IT infrastructure. It is also important to organize the information access in accordance with the employee position and his/her functions. By encouraging employees to replenish and to actively use the knowledge databases, companies are able to benefit from knowledge sharing engagement (cost reduction, better business performance).

Codification is normally used when the automated management systems (ERP systems, CRM systems) or electronic document management are being implemented in the organizations. The main advantages of the codification knowledge sharing model are:

- saving time on the paperwork;
- document duplication avoidance;
- administrative costs reduction;
- paperwork and telecommunications costs reduction;
- transportation costs reduction;
- customer service costs reduction;
- productivity growth (shorter education period, faster documentation access);
- intellectual capital cost increase (intensive experience exchange, lower error rate, lower loss regarding the specialists quitting the company, higher education programs' efficiency)

The *personalization* knowledge sharing strategy is based on the personnel creativity development and knowledge sharing facilitation. It is mostly suitable for the companies with a matrix and project structures, who hold video conferences, use individual meetings and electronic correspondence. Thus, as organizational knowledge sharing is based on the group psychology and community mindset, the main focus of codification strategy is a project teamwork and other kinds of internal networking aimed at problem solving based on the

common effort. Speaking about the reward system, workers benefit from the mutual knowledge sharing and collaboration instead of solely codifying their knowledge into the databases. Main characteristics of codification approach are all kinds of coaching and mentoring, self-development at work, group creativity enhancement and effective knowledge-sharing techniques. Furthermore, such a strategy is well-combined with innovation solutions (Nestik, 2014).

3.3.2. Competitiveness and knowledge sharing in Russia

Among the KM practitioners and managers, knowledge sharing is viewed as an essential antecedent to competitive advantage. Knowledge sharing is described as the process of identifying, capturing, and leveraging the knowledge, know-how, and best practices within an organization (Leonard, 1995; O'Dell & Grayson, 1998; von Krogh, 1998, as cited in Husted & Michailova, 2002).

The ability to facilitate the knowledge sharing processes between employees, allows companies to control knowledge duplication while producing it, aimed at the distribution of the best practices via making the relevant information easily accessible regardless of where it is obtained and stored originally in the organization. Furthermore, knowledge sharing enables the knowledge creation which is a process including sharing tacit knowledge and turning a part of tacit knowledge into explicit knowledge (Nonaka & Takeuchi, 1995).

In their paper, Husted and Michailova (2002) state that there are factors that guarantee the competitiveness of the company – present-oriented and future-oriented. Particularly, the knowledge sharing belongs to present, whereas readiness for the experiments and access to the external knowledge are related to the future success of the company. Owning a great pool of resources, the businesses frequently do not recognize the "bulk of an iceberg" – they do not see or use the untapped potential in the shape of hidden knowledge.

3.3.3. Challenges of knowledge sharing in the organizations in Russia

There are several challenges which modern organizations face in terms of the knowledge management. "When employees walk out the door, they take valuable organizational

knowledge with them" (Lesser & Prusak 2001, p. 1). Being the most abundant source of knowledge, many organizations continue to ignore the human factor. The problem is that employees are not eager to share the information due to the several reasons: they do not want to waste their time, they do not have any incentive, or they are afraid of losing their status. Furthermore, the workers are worried that someone with whom they will share their professional experience may take their position and they may end up losing their job. Therefore, the task of the modern organization knowledge management is to make every effort to eliminate the stereotypes that impede knowledge sharing, learning and to create a corporate culture which supports knowledge dissemination.

The empirical research conducted by Nestik (2014) has revealed several obstacles that hinder the knowledge sharing in Russian companies (Nestik, 2009, 2014; Zhuravlev & Nestik, 2010, 2012). These barriers are:

– the fear of employees being easily replaced if the knowledge is transferred;
– the fear of losing their significance as specialists;
– low team awareness of the company business and common goals;
– the process of knowledge sharing is hindered by the complex set of actions and approvals which slow down the process;
– instead of the problem experience analysis, the responsible employees are blamed guilty;
– the fear of employees that their unique ideas will be stolen and appropriated by the others

Generally, the majority of issues which influence the quality of the knowledge sharing in Russian organizations are related to a low level of trust within an organization and weak corporate culture. Furthermore, the national culture determines the nature of the problems. (Zhuravlev & Nestik, 2010, 2012; Nestik, 2014).

The studies also confirm that there is a strong correlation between the trust level in the organization and readiness of the employees to share the knowledge. It appears that if mutual trust is necessary for addressing the knowledge shared in the organization, then sharing one's experience and skills also requires a sense of belonging to the same community and to one

social group (Zhuravlev & Nestik, 2010, 2011a, 2011b; Zhuravlev, Nestik & Nikitenko, 2009, as cited in Nestik 2014).

Another study mentioned by Nestik (2014) has shown that the group trust plays a key role in the corporate knowledge management system formation. It is based on the method of M. Marquardt "Self-Learning Organization" (Marquardt, 2001) which was used to measure the level of the knowledge management system development. Moreover, in order to measure the internal trust level in the organization, the method of organizational trust by L. Huff and L. Kelley was applied (2003). Nestik (2014) states that not all elements of the knowledge management system appeared to be associated with the socio-psychological characteristics of the groups. For example, the group trust level and group unity do not prove relations with the performance-oriented electronic systems usage, distance education, customer information exchange, launching innovation projects and employee training support. Furthermore, the organizational trust level is tightly connected with the company's ability to attract the external knowledge, to make the knowledge accessible and the quick "lessons learned" based on the common experience.

The main output of the previous research indicates that most of the time, the effectiveness of the organizational knowledge sharing in Russia is primarily defined by the socio-psychological aspects rather than by the IT infrastructure development (Nestik, 2014). Also, Nestik (2014) emphasizes the significance of the group reflexivity – the aim is to help employees to see their role in joint activities. As the knowledge sharing happens mostly on the individual level (social exchange), the group is characterized by the group reflection (Nestik, 2013, 2014). The main function of the latter is to prepare the groups for changes and upcoming joint activities and to support a positive group identity (Zhuravlev & Nestik, 2011, 2012). The sense of belonging to the group allows a psychological exchange to take place.

3.3.4. Knowledge-sharing hostility in Russia

According to Husted & Michailova (2002), the main problems and obstacles regarding the sharing of knowledge in Russian organizations are "reinforced and perpetuated in the

Russian business culture and organizational realities" (p.19). As the management style is based on the cultural peculiarities, and therefore directly affect the KM practices across the businesses. The work of Husted and Michailova (2002) is built upon the contradiction between Western companies and Russian companies. In comparison to the Western culture, Russia (the former Soviet Union) has been isolated for a long period of time. This led to the poor experience of collaboration, which causes problems in the "development of the alliance" (p.19). Their study has revealed that the aim of Russian managers and workers tend to accumulate knowledge but not to share it. Moreover, the knowledge is seen as an individual power resource rather than a common good. Although Russian culture is normally described as a collectivist culture (Bollinger, 1994; Garrison & Artemyev,1994; Hofstede, 1984; Smith, 1990, as cited in Husted & Michailova, 2002), Russian managers show unwillingness to share the knowledge inside an organization, which contradicts with collectivist nature.

Furthermore, Husted and Michailova (2002) state that, according to Lawrence and Vlachoutsicos (1990, p. 282), “Russian managers do not share information with outsiders without a clear explicit instruction” and “they rarely volunteer information”. The *lack of incentives for sharing knowledge* is due to the strong belief that their future career directly depends on the amount of knowledge they possess, which has to be protected from the others in order to eliminate the personal competitive advantage loss. Husted and Michailova (2002) illustrate this statement with a very distinctive example – Russian people collect as many diplomas as they can from attending various courses or trainings. But the most curious observation is that they demonstrate these papers in the most visible ways in the office premises. However, when it comes to the working seminars or teamwork with colleagues, Russians are opposed to present their knowledge unless it gives them a career growth opportunity. The biggest discrepancy is that although obtaining a diploma is a powerful stimulus for the workers to participate in such activities, it is still stronger than the received knowledge and the learning outcome.

Another problem in Russian companies which Husted and Michailova (2002) have described is so-called *departmental way of thinking and acting.* In the scope of the various departments

within one company it is essential to communicate and to share the knowledge between the divisions in order to "make use of the full body of their knowledge". Most of the time, departments exist in parallel, only being oriented towards their own goals, not attributing themselves to the company as a single whole. As the functions and responsibilities of the employees are strictly distributed, workers are not motivated to raise the cross-boundary questions. Furthermore, they might be subjected to lose their job, or this will be ignored due to the absence of interest among the managers. In this case the performance and competitive advantage of the firm are neglected because the management is solely focused on the internal issues.

Speaking about the working process, Husted and Michailova (2002) mention the *fear of making and admitting mistakes*. According to their research, voicing problems and discussing mistakes are taboo in organizations in Russia. Not seeing mistakes as a learning resource, Russian employees are often playing the role of "executors" – they fulfil tasks according to already prescribed plan, not paying attention to the process. Neither do Russian employees like to reflect on their decision-making process, being highly convinced that "we are here to learn, not to discuss our problems" (Hibbert, 1990, as cited in Husted & Michailova, 2002). By eliminating the possibility to make any mistake, Russian companies neglect sharing the most valuable knowledge – experience. Generally, the managers stick to the tactics of not acting, and, therefore, not making mistakes. Moreover, Russians find any kind of problem discussion confusing and they try to avoid it (Michailova & Anisimova, 1999, as cited in Husted & Michailova, 2002). The reluctance towards an open discussion finds its roots in "coercive bureaucracy" (Adler, 1999, as cited in Husted & Michailova, 2002), which is quite exemplary for Russian organizations. According to the researchers, it is caused by the authority control, top-down command approach and autocratic strategy development. Husted and Michailova also add the lack of reflection and the absence of the feedback as such. Thus, such a strict hierarchy dictates unquestioning obedience and impedes the knowledge sharing process. Pondering the lessons learned is essential for the better understanding on how to eliminate the problems in the future and how to avoid repeating mistakes.

Other challenges that Husted and Michilova (2002) mention are related to the "knowledge-receivers". Firstly, they introduce the “not-invented-here” (NIH) syndrome (Katz & Allen, 1982, as cited in Husted & Michailova, 2002), which is characterized by resisting to accept and doubting in the knowledge sources created outside the company. Russian employees tend to avoid heterogeneous knowledge because, according to the research, creation of the new knowledge has more prestige. As an example, Husted and Michailova (2002) describe a management team in a Russian organization who are confident that they have monopolized the knowledge in their professional field and, therefore, they do not accept ideas elsewhere (Katz & Allen, 1982, as cited in Husted & Michailova, 2002). Furthermore, there are two factors which strengthen the NIH-syndrome: 1) strong group connection and mistrust towards the knowledge owned by the foreigners; 2) mistrust towards the knowledge owned by foreigners especially in terms of its applicability in the Russian context. The first factor refers to the fact that Russian culture is collectivist and people tend to develop strong relationships within the group. Thus, the employees show resistance towards any novelty, as they think it might endanger the sense of familiarity, stability, organizational hierarchy and continuity. The second factor demonstrates the *risk averse behavior* – by escaping the new knowledge, Russian workers justify and keep the *status quo* (Husted & Michailova, 2002).

Another problem which Russian organizations face is the *lack of absorption capacity* (Husted & Michailova, 2002). The notion has been introduced by Cohen and Levinthal (1990) which refers to the knowledge usage ability. Such capacity is "based on the presence of prior related knowledge" (Husted & Michailova, 2002). An empirical study by Szulanski (1996) on the organizational knowledge transfer has shown that knowledge transfer is lower in the organizations where knowledge recipients are tightly connected with the knowledge source which blocks the unlearning of prior knowledge.

Primacy of the hierarchical status is also a serious obstacle in terms of the organizational knowledge sharing in Russia. Strict hierarchy and formal status are the biggest barriers – top managers in Russian firms do not tolerate learning from lower level employees and become displeased when they are forced to work in the same group. Welsh, Luthans & Sommer (1993) have concluded that "participative intervention seemed to have a counterproductive

effect on the Russian workers' performance" and that "participative efforts threatened the Russian cultural value of communal work" (as cited in Husted & Michailova, 2002). Welsh has particularly pointed out (1993):

By deliberately holding back, Russian workers could avoid the frustration of being rejected or ignored. In addition, by not truly participating or giving meaningful suggestions in front of outsiders, the workers would not put themselves in the position of expressing problems inhibiting performance, comments they may have feared would be received as complaints regarding co-workers. (p. 74).

On top of that, another study of 25 different organizations in St. Petersburg by Longenecker & Popovski (1994. p.38) showed that the biggest problem was "lack of employee involvement and motivation" (as cited in Husted & Michailova, 2002). Companies need to educate the top management and KM executives on how to manage knowledge strategically in order to achieve positive results. It is essential for the managers to be encouraged to share their knowledge in an effective way and implement ad hoc methods for the better knowledge conversion within the company.

3.4 Competitiveness factors in Russia

Nowadays, the competitiveness level of the enterprises has raised on the global level due to the growing amount of companies and businesses. Competitiveness is one of the key macroeconomic indicators that demonstrate the status quo and the development prospects of a country's economic system, and that determines its position in the international system of labor division (Malygin & Sheiko, 2018). In other words, it is the ability to produce goods which can meet the requirements of the world market in conditions of a free competitive market (Kudryashov, 2013, as cited in Malygin & Sheiko, 2018). They mention that in 2016 Russia ranked 45th out of 140 according to the global competitiveness index developed by the World Economic Forum. Therefore, there is a need for focusing on the knowledge-intensive workers and companies rather than being oriented on the export-raw material model of the economic development which Russia is famous for. On the international scale, Russia has traditionally been ascribed to the group of the developing countries characterized

by a high political and economic instability, poor investment climate and extremely high risks of leading a business activity.

The fundamental problem of the modern knowledge economy is how to survive in the oversaturated market environment. The solution of the latter directly affects the manufacturing quality, profitability of the enterprises, adaptation to the current market conditions and the successive economic growth. At the moment, there is a significant leap in competition on the Russian market, and therefore, at this stage of development, there is a high demand for ground alterations developments aimed at enhancing the competitiveness of businesses in Russia (Polkina & Sukhoruchkin, 2016).

The competitiveness of an enterprise is based on the thoroughly defined competitive advantage strategies and its corporate culture. Companies are more successful and stable on the market when they have full control over their competitive advantage. Knowledge has always been linked to the competitive advantage due to its high economic power. In modern literature, the concept of the knowledge management is viewed as a new managerial function which consists of a “systematic and targeted creation, updating and application of knowledge to maximize the effectiveness of the company and the profit from knowledge-based assets" (Khamatnurova & Guzhavina, 2013, p.3). On the part of the management, knowledge management is seen as one of the most effective tools of the personnel development system, moreover, goal-oriented personnel management promotes effective use of corporate knowledge. Thus, the chances to increase the competitiveness level are growing.

Lee, Tun-Lee Foo, Leong and Ooi, K-B. (2016) in their work refer to Drucker (1995) who claimed that the most vital economic resource for achieving a competitive advantage is knowledge. Mentioning the collective knowledge, Lee et al. say that it resides in the minds of personnel and is the most important resource which guarantees a stable growth of a company. Furthermore, it is more important than such traditional factors of production as labor, land or capital (Grossman, 2006, as cited in Lee et al., 2016). However, it is not enough being solely oriented on maintaining a high competitiveness level, it may prove to be ineffective due to a highly volatile and dynamic economic environment. There is always a

high chance of being copied by the competitors: stealing the original idea, substitution of the product, or any kind of fraud the company may face. Thus, the enterprises should implement innovation strategies and focus on the business identity.

Speaking about Russian market, there are several problems (challenges) that local companies face, and which impede the performance growth. Polkina and Sukhoruchkin (2016) state that there are two main factors types: internal and external. According to their research, the external factors detain the competitiveness development of Russian manufacturers:

- failure to fully use the potential of the local Russian scientists and specialists to conduct the necessary research;
- significant pressure on domestic manufacturers from foreign competitors;
- financing of technology and innovation in a market economy conditions means the absence of guarantees of regular income, giving it a probabilistic forecast;
- absence of a unified conceptual approach towards the creation of an all-in-one national innovation system;
- low financial development of the innovation activities held by commercial banks and venture funds;
- unprotected domestic market from cheap and low-quality products

The internal factors are the objective criteria which determine the ability of an enterprise to ensure its own competitiveness. Such factors are:

- low innovation policy and technology marketing;
- high costs;
- outdated equipment;
- long period of innovation payback;
- lack of sufficient personnel expertise;
- lack of information regarding the latest technologies, a complete absence of information on sales markets, insufficient cooperation with other companies

All of the mentioned above obstacles may prevent Russian companies from achieving high results in the business context. Therefore, they inhibit the competitiveness and growth development, degrading efficiency and preventing innovation implementation.

3.5. The role of the top management support, openness & trust, and reward system in knowledge sharing

3.5.1. Top management support

Individuals tend to always seek approval from the supervisors or other higher ranks. This is due to the increasing level of encouragement if a person feels that "important referent individuals are likely to approve and appreciate such behavior (Cabrera et al, 2006 as cited in Youssef et al, 2017, p. 927). According to Wang and Noe (2010), top management support and their knowledge appreciation promote employee commitment towards the knowledge sharing and exchange between employees (Singh, Gupta, Busso & Kamboj, 2019).

Top management support is seen as one of the key factors driving organizational knowledge (Connelly & Kelloway, 2003). Support from above is important when the companies are providing employees with the adequate amount of resources and endorsement opportunities (Lin, 2006, as cited in Svetlik, Stavrou-Costea & Lin, 2007). According to MacNeil (2004), visible top management's support serves as a determinant for an organizational knowledge sharing environment. Furthermore, encouragement regarding the knowledge sharing transmitted by the top management formulates a positive basis for the personnel communication (Lin & Lee, 2004, as cited in Svetlik, Stavrou-Costea & Lin, 2007)

As it was investigated earlier, support from the higher ranks affects positively the learning and creativity, thus, the knowledge sharing among employees (Amabile, Conti, Coon, Lazenby & Herron, 1996; Davenport et al, 1998, as cited in Youssef et al, 2017). By providing a proper climate inside an enterprise and creating a safe space where employees are assisted with supervisory help or advisory matters, companies enhance knowledge sharing activities. Moreover, an open leadership climate (Taylor & Wright, 2004, as cited in Svetlik, Stavrou-Costea & Lin, 2007) and support from the top management have been

identified as critical driving force for the successful knowledge sharing (MacNeil, 2003; MacNeil, 2004, as cited in Reid, 2003).

The study by Chiang, Han & Chuang (2011) has shown that a valued employee develops a commitment through perceived organizational support, thus, becoming beneficial for an organization. Furthermore, the authors suggest that employees' participation in the decision making is a tool for developing trust in an enterprise, therefore, stimulating knowledge-sharing behavior.

According to Leistner (2010), the trust towards the senior management is shown when the workers are given an opportunity to implement and try out various innovative projects aimed at stimulating the knowledge flow inside the company. Thus, supporting initiatives, companies may get new ideas and increase the level of creativity for the sake of business.

3.5.2. Top management support in Russian context

Speaking about the Russian realities, support from the top management may be seen as something suspicious or unnatural for the organizational culture and hierarchy inside the company. It can be observed in the attitude to mistakes: usually the fear of making a mistake is quite strong among Russian employees. This is one of the reasons why the delegation of authority in many Russian companies is quite difficult to execute: mid-managerial positions often prefer not to act at all to avoid making mistakes (Kets De Vries, 2000; Shekshnia, 1994, as cited in Andreeva & Ihilchik, 2009). Thus, eliminating any contacts with subordinates, managers distance themselves, not providing any adequate support. Moreover, a competitive atmosphere and a strong belief of hoarding knowledge for the competitive advantage prevent building trusting and supportive relationships between the top management and employees.

Another characteristic of the relationships between Russian top management and employees is the attitude to mentoring – the majority of Russian enterprises implement mentoring only during the probationary period of a new employee, when a mentor is responsible for the explanation of the general organizational policy rather than intensive sharing of own experience and intensive training. This is always due to the limited time resources, inability

of managers to execute their tasks as well as to pay attention to newcomers and most importantly – a very competitive atmosphere inside the company. Moreover, abrupt economic changes including mass layoffs, have pushed top managers (potential mentors) to become reluctant towards sharing their knowledge and experience because of the fear of being fired and replaced by the younger specialists (Andreeva, 2009, as cited in Andreeva & Ihilchik, 2009).

The findings illustrating the relationship between top management support and knowledge sharing allow to develop the following hypothesis:

H1: Top management support has a significant effect on the knowledge-sharing behavior

3.5.3. Openness & trust

Organizations can benefit from creating an internal knowledge sharing culture through effective knowledge integration into their business strategies and encouraging workers to develop positive attitudes to share knowledge (Connelly & Kelloway, 2003; Lin & Lee, 2004, as cited in Svetlik, Stavrou-Costea & Lin, 2007).

It comes as no surprise that trust and openness are able to boost the knowledge sharing in an organization. Through encouraging people to rely on each other and maintaining an open atmosphere, companies are able to bring people together and make them more eager to communicate. "Interpersonal trust can be defined as a person's willingness to depend on another person's actions that involve opportunism (Willliams, 2001; Zand, 1972, as cited in Chowdhury, 2005). Sharing information with others tends to threaten the "ownership of an idea", however, there is a high probability that a person will show trust if he or she finds it beneficial or at least not harmful (Gambetta, 1988, 2015, as cited in Chowdhury, 2005). As Chowdhury mentions, there is no unified classification of trust factors (Mayer, Davis & Shoorman, 1995). Speaking about the knowledge sharing, many scholars have highlighted trust as a fundamental factor which leads to effective professional and social collaboration (Blau, 1964; Williams, 2001; Woods, 2001, as cited in Chowdhury, 2005). Openness can mark knowledge-sharing behavior because openness represents a person's curiosity and originality, which in turn are factors of whether a person will seek other people’s expertise

and advice (Cabrera, Collins & Salgado, 2006, as cited in Youssef et al, 2017). Moreover, several trust enablers within the organizational context were highlighted by Widén-Wulff (2007, p. 133):

- common goals and commitment;
- collaboration;
- individual expertise;
- correct information

In the article by Adi Gaskell (2019), he mentions a study published in the *Academy of Management Journal* on how workers share ideas between each other within the organizations, highlighting the fact that individuals repeat behavior directed at them – a "golden rule". Furthermore, openness to the new experience is connected with active imagination, intellectual curiosity and originality (Costa & McCrae, 1992, as cited in Youssef et al, 2017)

Trust has been defined as a fundamental factor promoting high quality knowledge flow within business networks and between employees (Murphy, 2006, as cited in Connell & Voola, 2013). Moreover, it has also been seen as stipulation for building internal relationships which enable the exchange of knowledge (Fukuyama, 1995, as cited in Connell & Voola, 2013).

Through creating co-working opportunities based on mutual trust, companies eliminate professional rivalry and confrontation. Furthermore, such an environment promotes the state of ‘‘competitive collaboration’’ (Doz, 1996), which allows to lower the risks of opportunistic behavior. Thus, collaboration occurs when the goodwill and reciprocal understanding between actors is encouraged. However, trust is not a static object – “it is a dynamic process that evolves according to the development of the relationship” (Clegg, 2000; as cited in Connell & Voola, 2013). Building trust may be also challenging for the new employees when they are joining an organization – pretty often they have to “fend for themselves” (Connell & Voola, 2013), or “tap into” the relationships, proving they have knowledge to share

(Murphy, 2006). Hence, ensuring the trust-driven communication, companies can profit in a long-term perspective.

Supporting the positive aspect of trust, it is known that people prefer to communicate with other people rather than with documents (Levin & Cross, 2004, as cited in McNeish & Mann, 2010). Individuals, whose communication is based on trust prefer fewer formal procedures, are more open and flexible, use decentralized decision-making processes, showing lower impersonality in relationships (Aldrich & Fiol, 1994; Lewis & Weigert, 1985, as cited in McNeish & Mann, 2010) – which indicates the growth of knowledge sharing. Yousef et al. address the theory of reasoned action (TRA), naming the trust an "environmental constraint" which affects the attitudes of the personnel towards knowledge-sharing behavior (2017). Thus, close contacts and face-to face communication among the workers, supported by the positive incentives, can foster knowledge sharing in organizations.

Another curious aspect of trust was brought by Leistner (2010) – trust in a workplace can be divided into two types: personal trust and topical trust. The first type is the interpersonal relationships, while a topical type is related to a person's qualification and knowledge. People may not rely on each other on a personal level, whereas they can give credit to the professional skills of their co-workers (Leistner, 2010). However, these two types are often correlated – effective collaborative work is often based on the positive feelings people have towards each other. Being a matter of time, personal trust, once developed, may lead to professional trust (Leistner, 2010).

3.5.4. Openness and trust in Russian context

In Russian companies, employees tend to show medium or low loyalty towards the employer (May, Young & Ledgerwood, 1998, as cited in Andreeva & Ihilchik, 2009). This tendency is a result of decades of economic instability and severe upheavals associated with the social problems, as well as the organizational levels, when mass fluctuations occur (Gurkov & Zelenova, 2007, as cited in Andreeva & Ihilchik, 2009).

A management tool offered by Nonaka and Takeuchi (1995) is an open dialogue between employees inside the company. Unfortunately, the use of this tool is problematic in Russian

companies – there is a tense relationship between management and subordinates, which is typical for many Russian organizations (May, Young & Ledgerwood, 1998, as cited in Andreeva & Ihilchik, 2009). It significantly undermines the trust level in an organization, and as information and knowledge are seen as a source of power, employees resist sharing it with anyone without special need (Michailova & Husted, 2003, as cited in Andreeva & Ihilchik, 2009). Moreover, openness among colleagues is considered to be inappropriate and quite often employees who show interest in personal achievement are eliminated from the organizations due to the rigid system aimed at mediocre workers with no ambitions (Michailova, 1998, as cited in Michailova & Husted, 2003). The importance of the physical proximity for establishing organizational trust was discussed by Leonard and Sensiper (1998), as cited in Husted & Michailova (2002). As a complex concept, knowledge is being hard to share between the partners with different cultural backgrounds (for example Russian vs Western organizations), therefore, it requires establishing "tight ties" based on the mutual trust. The more the employees accumulate and share information through active interaction, the more attachment is developed between them (Inkpen & Beamish, 1997, as cited in Husted & Michailova, 2002). Furthremore, such an attachment promotes forming mutual trust through gradual cultural barriers' elimination and increases the chances of productive knowledge sharing (Meschi, 1997, as cited in Husted & Michailova, 2002).

Based on the prior research and findings regarding the relationship between openness and trust and knowledge sharing, the following hypothesis was developed:

H2: Openness and trust have a significant effect on the knowledge-sharing behavior

3.5.5. Organizational reward system

Rewards are the great incentives in terms of organizational environment, and they tend to exist in two forms: tangible and intangible. Tangible rewards are represented by the recognition from the top management as a feedback or simple gratitude. It means acknowledging all efforts that an individual has made – as a result uniting employee and supervisor, promoting commitment (Milne, 2007). This master's thesis primarily focuses on the tangible rewards and their effects on the organizational knowledge sharing.

Tangible rewards can be money, various tickets or certificates. According to Milne, tangible rewards increase motivation in terms of work completion or over-productivity. Several factors of the performance bosting were outlined by Cameron and Pierce (Cameron & Pierce, 1997, as cited in Milne, 2007):

- rewards depend on quality or concrete tasks;
- rewards depend on challenging activities;
- rewards are given for mastering skills;
- rewards are given for being active and showing effort

Internal competition for the rewards, status and promotion in the workspace forces employees to perceive their knowledge as a tool to ensure their position in the organization (Ba et al, 2001; Huber, 1982; Menon and Pfeffer, 2003; Zack, 1999, as cited in Lee & Ahn, 2007). Under the fear of downsizing and general job insecurity, people become less motivated to share their knowledge which is costly for the organizations – it is a time and energy-consuming activity, moreover, these resources are limited (Davenport & Prusak, 1998; Goodman & Darr, 1998; Szulanski, 1996, as cited in Lee & Ahn, 2007).

In order to maintain the continuous knowledge sharing, several authors argued that reward systems should be integrated in the organizational incentive framework (Alavi & Leidner, 1999; Ba et al, 2001; Davenport & Prusak, 1998; Gold et al, 2001, as cited in Lee & Ahn, 2007). Youssef et al (2017) quotes: "according to the expectancy theory (Vroom, 1964), intentions to perform a certain behavior are in part determined by consequence expectation", pointing out the importance of the clear outcomes' formulation (p.928). Thus, providing employees with reward stimuli, companies are able to enhance knowledge-sharing behavior inside an organization (Bartol & Srivastava, 2002, as cited in Reid, 2003).

A relation between reward system and knowledge sharing has been discussed by Saqib, Abrar, Sabir, Bashir & Baig (2015) – motivation and satisfaction between employees can increase productivity and effectiveness of an organization. Moreover, the organizational

reward system should exist in the framework that promotes knowledge sharing based on the recognition and positive attitude (O'Dell & Hubert, 2011, as cited in Youssef et al., 2017). However, reward systems are quite frequently a subject of dispute (Lachance, 2000; Milne, 2007). Here are several examples that illustrate the practical implications of reward systems integration: Buckman Laboratories gives recognition to its 100 top knowledge contributors which is held at an annual conference at a resort site. Furthermore, an IBM department "Lotus Development" attributes 25 percent of its total performance results to the knowledge sharing activities executed by the customer support division (Bartol & Srivastava, 2002, as cited in Svetlik, Stavrou-Costea & Lin, 2007).

3.5.6. Organizational reward system in Russian context

According to Huddleston & Good (1999), most motivation theories that are used nowadays were created and tested in the USA, however, "have failed to provide consistently useful explanations outside the USA" (p. 385). In terms of Russian legislation, unfortunately, local standards do not involve areas that reflect the interests of many employees – employee rewarding systems. In practice, this field becomes very complicated due to many limitations. The laws and other normative acts of the Russian Federation are quite vague and blurred in terms of identifying the "employee benefits", the only analogue is "labor costs". The synonyms of the term "employee benefits" as an economic category are "wages", "salary" and "remuneration for work" (Ermakova & Ahmetova, 2011). Such a complicated system of reward assessment is compounded by the fact that there is almost no research covering the effectiveness of reward systems implemented on each level in Russian organizations. Ermolina & Tarotenko refer to "legal peculiarities and totalitarian impact" when speaking about Russian rewarding concept (2013, p.137). They claim that Russian employers tend to use rewards as a manipulative tool often abusing their power.

By trying to keep an employee at work, a wide range of measures is applied: bonuses, loan systems, special social and compensation payments (Ermolina & Tarotenko, 2013). So-called "emotional submission" occurs because employee's legal protection is quite low – there are practically no counteractions to various illegal measures to manage the motivation of workers in Russia (Ermolina & Tarotenko, 2013). Legal problems of labor motivation are

growing among informally (illegally) employed people. They get zero support – statistical data shows that on average, from 10% to 20% of the enterprises resort to informal hiring of temporary workers or specialists in Russia (Akimova, 2009 as cited in Ermolina & Tarotenko, 2013). Other aspects that have a negative impact on the whole working process are low wages and poor correlation between results and wages. Nowadays Western countries seek fair distribution of wages by using the following scheme: basic salary + payment for the achieved result. The following ratio is approximately 70: 30. However, while Russia has also adopted this scheme, the level of the basic (guaranteed) salary is approximately 20% to 50%. This obviously distorts the very idea of increasing motivation for workers (Ermolina & Tarotenko, 2013). Having limited resources, many Russian budgetary organizations attract employees by offering "social packages" (sick leave payment, paid leave). But not all organizations can offer social packages. Lack of the social protection is the greatest demotivator – in Russia, wage minimum is set by the state, which is lower than the minimal cost of living. As a result, such a minimum allows the employer to earn extra profits by saving on wages, which is widely spread across many Russian enterprises (Ermolina & Tarotenko, 2013). However, there are known cases of employee demotivation caused by excessive social protection – in Germany it is unprofitable to dismiss an employee, even if he or she does not fully execute the tasks, since the employer must pay the unemployment benefits (Abakumova, 2009, as cited Ermolina & Tarotenko, 2013).

Another particular factor influencing reward stimulation in Russian organizations is so-called Russian mentality (Ermolina & Tarotenko, 2013). As many authors note, a Russian worker is irrational in his behavior. He is often carried away by the result without a clear understanding of achieving the goal, being aware of necessary resources or evaluating his capabilities (he acts upon the principle: “we will take the fight, let's see what happens”) (Ermolina & Tarotenko, 2013). As a result, obstacles regarding the development of incentive/motivation systems arise. Generally, incentive systems are quite rational: achieving a certain result leads to a certain payment. When irrational employee behavior occurs, it is difficult to choose corresponding stimulus which will actually lead to the desired results. In this case, the manager should understand that methods of the employee motivation can be both tangible and intangible (Ermolina & Tarotenko, 2013).

Furthermore, management problems still occur in Russian organizations when motivation and reward systems are developed. It is noted that differences in management style are deeply rooted in socio-cultural and socio-psychological aspects (Ermolina & Tarotenko, 2013). According to Berdyaev, authoritarian management style and bureaucracy is hidden deepely in the subconscious – the average Russian person avoids responsibility and seeks to obey strong power (Pugacheva, 2013, as cited in Ermolina & Tarotenko, 2013). Therefore, a manager should always prove himself as a leader of a team. Such a powerful style allows to overcome numerous bureaucratic barriers in the organization. As organizational reward systems are based on the employee motivation, one of the main prerequisites for that is a transition from an administrative management style to a leadership management style (Ermolina & Tarotenko, 2013).

Based on the above-mentioned relationship between organizational reward system and knowledge sharing, the following hypothesis was developed:

H3: Reward system has a significant effect on the knowledge-sharing behavior

Knowledge, being highly contextual, is related to the previous experience in people's minds (Leistner, 2010). Yet, it cannot be managed, however, the knowledge flow might be initiated and fostered. Thus, organizational culture plays the key role in shaping the knowledge sharing framework – the more appealing to the employees the working environment is, the more potential a company has to make knowledge sharing actually work. Three main competitive factors influencing the knowledge sharing in organizations have been defined based on the prior research: openness and trust, top management support and reward system. Hence, these factors (latent variables) are checked to assess if they have a direct or an indirect effect on the competitiveness of a firm. In order to measure this relationship, we also argue that knowledge-sharing behavior not only has a direct effect on the firm's competitiveness, but also mediates the relationships between the top management support, openness and trust and reward system to firm's competitiveness. Thus, the following hypothesis was developed:

H4: Knowledge-sharing behavior has a significant effect on the firm's competitiveness.

3.6. Conceptual model

The proposed research model states that the knowledge-sharing behavior is affected by the three main factors: top management support, openness and trust and the reward system, and that each of these factors has a positive relation with knowledge-sharing behavior. The model also postulates that knowledge-sharing behavior has a positive impact on the firm's competitiveness. The four research hypotheses and the relationships have been derived throughout the literature review, see Figure 6.

Before testing the four hypotheses, the choice of the methodology and research strategy will be covered and explained in the next chapter.

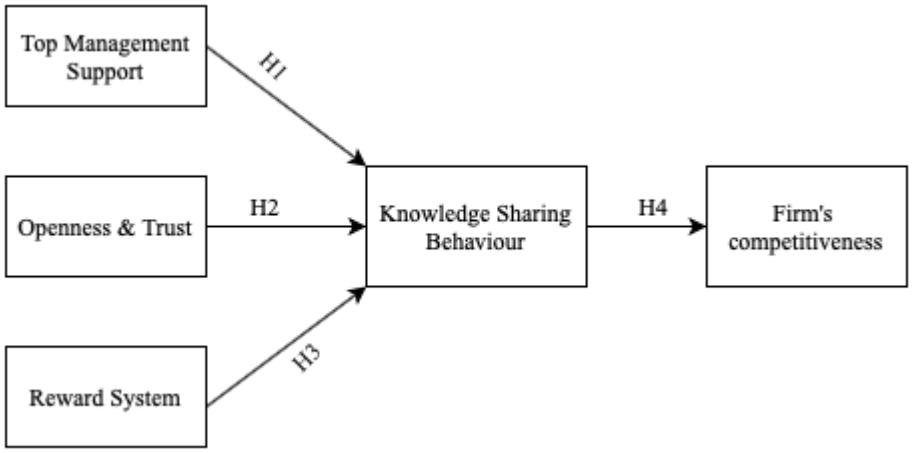

Figure 6. The conceptual model

Chapter 4: Methodology

This master's thesis represents a conceptual framework which has been drawn literature of management theory, information and knowledge management, knowledge sharing, knowledge economy and organizational behavior. The main source for the scholarly literature were electronic databases, though which the areas of study were selected. Prior to the research, the literature review was conducted in order to retrieve the publications covering the concepts of knowledge and how it is shared inside the organizations. The review allowed to narrow down to the specific relevant publications (articles, books). The following concepts were discovered upon the review process: tacit and explicit knowledge; socialization, externalization, combination and internalization of knowledge; competitiveness and knowledge sharing.

The relevant methodology allows to find the best solution for the data analysis – it is an essential tool for the researchers. Calling a research "an art of investigation", Kothari (2004) emphasizes the creative approach towards an effective research method application. Defining a problem and formulating hypothesis does not complete a research – it requires much more effort: collecting, organizing and evaluating data, making conclusions and testing the goodness-of-fit of a proposed model or theory (Kothari, 2004).

4.1. Quantitative and qualitative research methods

Research as a holistic concept which is deeply rooted in our society – it is conducted in order to statistically and scientifically validate certain assumptions. As a research is ultimately based on the objective verification of the hypotheses, there is a need for a scientific analysis and choice of the respective methodologies for testing the hypotheses (Taylor, 2005). Both quantitative and qualitative research have the same basis, aiming at validity and reliability of the research.

Qualitative research relies on interviews, direct observation, written documentation (i.e. questionnaires, diaries or program records) (Taylor, 2005). Qualitative research implies a naturalistic approach towards the subject of study, "attempting to make sense, of, or interpret phenomena in terms of the meanings people bring to them" (Thomas, 2003, p. 1). Generally,

qualitative research "begins as raw, descriptive information about programs and people in programs" (Patton, 1997, 2002, as cited in Taylor, 2005, p. 4). Data, being expressed through the words, is classified, categorized, and after that the concept is described in detail (Taylor, 2005). Qualitative research is subjective – it is related to the attitudes, opinions and behavior, being a functional tool, which transmits researcher's insights and impressions (Kothari, 2004). Such a research provides results in a non-quantitative form and it is not strictly analyzed in terms of a quantity through the focus group interviews, projective techniques or depth interviews (Kothari, 2004).

Quantitative research methods are usually illustrated by the scores and measures, producing numerical data (Taylor, 2005). Their aim is to measure and analyze the relationships between variables though testing hypothetical generalizations (Denzin & Lincoln, 1998; Hoepfl, 1997, as cited in Golafshani, 2003). "A quantitative researcher attempts to fragment and delimit phenomena into measurable or common categories that can be applied to all of the subjects or wider and similar situations" (Winter, 2000, as cited in Golafshani, 2003, p. 598). Thus, measurable variables are used to validate the hypotheses. Contrasting with the qualitative research, the quantitative research relies on a greater control over the observed environment – variables can be manipulated in order to track the effect on other constructs (Kothari, 2004). So-called simulation aspect of the quantitative research endows the original conditions, parameters and exogenous variables with values, therefore depicting the behavior of the process and allowing researchers to define its future prognosis.

4.2. Chosen method

The goal of this master's thesis is to detect the extent to which the proposed assumptions regarding the relationship between the top management support, openness and trust and reward system to knowledge-sharing behavior and the relationship between knowledge-sharing behavior and firm's competitiveness in the context of Northwestern region of Russia are strong and significant. Therefore, the conceptual model is examined for its relevance. To test the model, a quantitative research approach was chosen based on the prior literature review and relevant studies' examination (Chow & Chan, 2008; Hair, Risher, Sarstedt, & Ringle, 2018; Hussain, & Endut, 2018; Nikou, 2019; Salkind, 2010; Svetlik, Stavrou-Costea

& Lin, 2007; Youssef et al, 2017). Moreover, a quantitative research method (survey questionnaire) was chosen in order to receive opinions and feedback on the proposed topic (see Section 5.6). The choice of such method is argued by the specific framework of the hypothesis's development, measurement instruments' selection, variables creation, data collection method and further data analysis.

4.3. Structural Equation Modelling (SEM)

In order to measure the relationships between the proposed constructs (latent variables), a Structural Equation Modeling (SEM) method was utilized. The concept of SEM was developed by many statisticians and methodologists, including Michael W. Browne, Karl G. Jöreskog, Dag Sorbom, and Bengt O. Muthén (Salkind, 2010). SEM is used in order to statistically test hypotheses of numerous relations between the measured variables (Salkind, 2010). SEM methodology combines three statistical techniques: multiple regression, path analysis and factor analysis. SEM is conducted in order to define to what extent the proposed theoretical model is supported by the obtained data, therefore, it is a confirmatory analysis method. The proposed model is normally viewed as "a set of relations among different constructs"(Salkind, 2010, p. 2). There are two types of SEM methods: covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM) (Hair, Ringle & Sarstedt, 2017). The first type is used in order to confirm or reject the theories, whereas the second type is related to the exploratory research and theory developments, explaining the variance in the dependent variables (Hair et al., 2017). The statistical methodology of this master's thesis is based on the PLS-SEM method which will be further discussed and illustrated.

4.4. PLS-SEM method

The PLS-SEM method is widely popular among the researchers as it allows to "estimate complex models with many constructs, indicator variables and structural paths without imposing distributional assumptions on the data" (Hair, Risher, Sarstedt, & Ringle, 2018, p. 3). Moreover, PLS-SEM illustrates the predictive aspect towards the estimation of statistical models for the further interpretations (Sarstedt et al, 2017; Wold, 1982, as cited in Hair et al, 2018). The usage of PLS-SEM is beneficial due to its high statistical power –it enables exploratory research to test a less developed or a still developing theory (Hair et al, 2018).

On top of that, PLS-SEM allows to find solutions where the small sample sizes take place (Fornell & Bookstein, 1982; Hair et al, 2017; Willaby et al, 2015, as cited in Hair et al, 2018).

Path models of PLS-SEM are visually represented as diagrams which show the relationships between the hypotheses and variables, while the constructs (variables which cannot be measured directly) are represented as circles or ovals (Hair, Hult, Ringle, & Sarstedt, 2016). Indicators (items, manifest variables) are represented as the rectangles, and the relationships between constructs, constructs and items are displayed as the single-headed arrows (Hair et al, 2016). PLS-SEM illustrates the predictive aspect towards estimation of statistical models for the further interpretations (Sarstedt et al., 2017; Wold, 1982, as cited in Hair et al, 2018). Therefore, PLS-SEM approach is highly beneficial for the researchers proposing conceptual models built upon the theoretical framework. In terms of this master's thesis, the goal of the developed conceptual model is to predict whether there is a significant correlation between factors affecting the knowledge-sharing behavior and consequently impacting a firm's competitiveness in the organizations of the Northwestern region of Russia. The following thesis' model includes five constructs and four hypotheses (relationships), therefore, the choice of the PLS-SEM method is considered to be relevant and appropriate for the statistical measurement. Furthermore, the SEM method was preliminarily utilized in the work of Youssef et al. (2017), endowing this conceptual model with a positive perspective, which secures a more solid grounding and reasoning for the proposed model.

In order to conduct further data analysis, SmartPLS software was used. The choice of the following software is due to its user-friendly interface and no requirements for the extensive prior knowledge.

4.5. Sample and data collection

In order to analyze the impact of knowledge sharing processes on the competitiveness level in Russian companies, twenty-eight observed variables, measuring the five constructs were used. The choice of such variables is justified by the study of Youssef at al. (2017) on the knowledge-sharing behavior in emerging economy of the Gulf area. This thesis' research is based on the following study due to the similar goals, proposed research model and

hypotheses. Moreover, the layout of the borrowed items has proven to work in the Russian organizational context, as well as the observed variables. Such a link with the previous study allowed to utilize reliable methods in order to minimize research errors and to see if this model is functional. Similarities in regional economy type have also promoted the choice of the base study.

The study of Youssef et al. (2017) proposes a SEM method in order to observe the impact of the three independent latent variables (top management support, openness and trust and the reward system) on the knowledge sharing processes inside the organizations as well as the impact of the latter on firm's competitiveness. Each of these observed variables was operationalized on a five-point Likert scale: the higher end of the scale represents respondent's strong agreement with the statement and the lower end of the scale represents a strong disagreement with the statement (Table 2). Respondents have to evaluate each item according to their opinion and experience. The questionnaire also includes four demographic variables based on the respondents' profiles – and they are used for the multigroup analysis to examine if the path relationships in the model will be affected by those control variables. The demographic variables (age, education, industry type, job function) were modified and adjusted according to the Russian socio-cultural context.

Table 2. Five-point Likert scale

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	2	3	4	5

The questionnaire was successfully pilot tested prior to this research, and proven to be relevant to the topic and, thus, exploitative. Therefore, it was created via online Google forms platform and an open link was distributed via Instagram, Facebook and Vkontakte (Russian analogue of Facebook) for the voluntary participation. The link to the questionnaire was accompanied by the explanation of the research significance and its relevance. Respondents were notified that they should be inhabitants of the Northwestern region of Russia in order to provide relevant information for the accuracy of the study.

Chapter 5: Results and data analysis

Following the methodology which has been represented in Chapter 4, this section provides the results of the conducted research. First, the descriptive analysis is illustrated and discussed, after that the results of the measurement model and structural model results are reported. Moreover, this chapter includes a multi-group analysis and mediation analysis. The data of 120 respondents was received and analyzed. In order to test the research hypotheses represented in the conceptual model, (Figure 6), the structural equation modeling technique was applied with the use of SmartPLS version 3.2.9.

Figure 7. Results and data analysis flowchart

5.1. Descriptive analysis

The first section of the questionnaire was aimed at obtaining the demographic data of the sample: age, education level, type of industry and job position. These 4 variables will be further utilized in a multi-group (MGA) analysis (See section 5.4).

5.1.1. Age of the respondents

Respondents were asked to indicate their age. Out of 120 respondents, the majority represents the age category between 25 and 35 years – 51 people (42,5 %). The second biggest group of 32 respondents (26,7%) belongs to the category of 25 years and below, followed by the third largest age group 46-55 counting 22 people (18,3 %). The remaining 12 (10 %) and 3 (2,5%) belong to 36-45 and 56 or above groups respectively. The age groups are represented in Table 3.

Table 3. Age of the respondents

	Frequency	***(%)***
25 or below	32	26, 7
25-35	51	42, 5
36-45	12	10
46-55	22	18, 3
56 or above	3	2,5
Total	120	100.0

5.1.2. Education level of the respondents

The education level of the respondents is distributed as follows: the majority 64 (53,3%) reported to hold a master's degree, 31 (25,8%) reported a bachelor's degree, 15 (12,5%) reported a technical/vocational education and training, 6 (5%) reported to have a Ph.D. degree and 4 (3,3%) reported high school degree (Table 4).

Table 4. Education level of the respondents

Education levels	***Frequency***	***(%)***
High school	4	3,3
Technical and Vocational Education and Training	15	12,5
Bachelor	31	25,8
Master	64	53,3
Ph.D. (Russia)	6	5
Doctoral degree (Russia)	0	0
Other	0	0
Total	120	100.0

5.1.3. Industry type

Being asked to specify their organization's industry type (Table 5), the majority of the respondents 31 (25,8%) stated "other" as the industry type, followed by the second biggest score of 21 (17,5%) which belongs to the Real Estate sector. Science and education sector accounts for 16 (13,3%), service sector accounts for 14 (11,7%) and finance sector accounts for 12 (10%), comprising the most frequent industry types. The remaining construction, health and social insurance, media, art and governmental, housing and communal services sectors account for 7 (5,8%), 6 (5%), 5 (4,2%), 5 (4,2%) and 3 (2,5%) respectively.

Table 5. Industry type

Industry type	***Frequency***	***(%)***
Science, education	16	13,3
Health, social insurance	6	5
Construction, other industries	7	5,8
Governmental, housing & communal services	3	2,5

Service	14	11,7
Finance	12	10
Media	5	4,2
Art	5	4,2
Real Estate	21	17,5
Other	31	25,8
Total	120	100.0

5.1.4. Job function of the respondents

Respondents were asked to report their position in the organization (Table 6). The data represents that 36 (30%) of the respondents hold executive positions, 27 (22,5%) and 22 (18,3%) hold managerial and administrative positions. Another big cluster of 23 (19,2%) is classified as "other", while the remaining 8 (6,7%) and 4 (3,3%) reported technical and service-oriented positions.

Table 6. Job function of the respondents

Job categories	***Frequency***	***(%)***
Administrative	22	18,3
Managerial	27	22,5
Service-oriented	4	3,3
Worker (executive)	36	30
Technical	8	6,7
Other	23	19,2
Total	120	100.0

5.2. Measurement model results

In order to access the measurement model, confirmatory factor analysis (CFA) was applied. According to Brown (2014), CFA is a type of structural equation modeling (SEM) used for measuring the relations between the observed measures (indicators) and the latent variables (factors), the hallmark of which is a hypothesis method. Under the process of CFA, the factor loadings, unique variances and modification indexes are estimated in order to obtain the best latent variables' indicators before testing a structural model (Schreiber, Nora, Stage, Barlow & King, 2006). The aim is to minimize the difference between estimated and observed matrices: a hypothesized model is utilized to estimate a population covariance matrix which is compared with the observed covariance matrix (Schreiber et al, 2006). The validity is tested through convergent and discriminant validity estimation.

The majority of the factor loadings showed the scores above 0.7, however items RS_1 and Comp_1 scored the values of 0.675 and 0.655. The suggested criteria for the loadings in the exploratory factor analysis literature are considered excellent if the value is more than 0.70, very good, if the value is above 0.63, good if it is above 0.55 good, fair if it is above 0.45, and poor if it is greater than 0.32 respectively (Comrey & Lee, 1992, as cited in DiStefano & Hess, 2005). Hence, the values of the items RS_1 and Comp_1 are acceptable for the model. All items with the loadings lower than these values were rejected and, therefore, removed.

As a part of confirmatory factor analysis, the convergent validity was tested through the composite reliability (CR) and the average variance extracted (AVE). The composite reliability results are illustrated in Table 7, ranging between 0.835 and 0.932. According to Hair et al. (2018), values between 0.70 and 0.90, indicate “satisfactory to good" level of reliability, therefore received values are relevant and consistent with the recommended threshold. Followed by the convergent validity measures, the average variance extracted (AVE) values are illustrated in the last column of the Table 7, ranging from 0.563 to 0.663. According to Hair et al (2018), the results are above the recommended score of 0.5, which shows that the construct validates a minimum of 50% of the items variance. Moreover, as the recommended minimum threshold for the Cronbach's alpha score is 0.70 (Hair et al, 2018), the received model values are accepted, ranging from 0.743 to 0.914.

Table 7. Reliability and validity

Construct	Item	Loadings	Cronbach's α	CR	AVE
Top Management Support	TMS_1	0.852	0.831	0.887	0.663
	TMS_2	0.770			
	TMS_3	0.806			
	TMS_7	0.827			
Openness & Trust	OT_1	0.832	0.914	0.932	0.662
	OT_2	0.788			
	OT_3	0.891			
	OT_4	0.730			
	OT_5	0.871			
	OT_6	0.826			
	OT_7	0.744			
Reward System	RS_1	0.675	0.747	0.835	0.630
	RS_3	0.789			
	RS_4	0.901			
Knowledge-sharing behavior	KSB_1	0.707	0.743	0.837	0.563
	KSB_2	0.741			
	KSB_5	0.758			
	KSB_6	0.794			
Firm's competitiveness	Comp_1	0.665	0.758	0.846	0.581
	Comp_2	0.720			
	Comp_3	0.837			
	Comp_4	0.821			

The discriminant validity can be measured by using Fornell & Larcker (1981) criterion and Heterotrait-monotrait (HTMT) (Henseler et al, 2015, as cited in Hair et al, 2018) ratio of correlation. According to Fornell-Lacker criterion, the square root of each construct's AVE should show a bigger value than the correlations with other latent constructs. The discriminant validity results are confirmed (Table 8) as the values received are greater than the correlations.

Table 8. Discriminant validity according to the Fornell-Larcker criterion

	Comp	KSB	OT	RS	TMS
Comp	**0.762**				
KSB	0.574	**0.751**			
OT	0.667	0.687	**0.814**		
RS	0.276	0.197	0.244	**0.794**	
TMS	0.650	0.557	0.766	0.296	**0.814**

Note: Comp= Firm's competitiveness; KSB= Knowledge-sharing behavior; OT = Openness & Trust; RS = Reward system; TMS = Top management support

An alternative approach to measure a discriminant validity is a Heterotrait-monotrait (HTMT) ratio of the correlation proposed by Henseler, Ringle and Sarstedt (2015). Values above 0.90 for structural models with conceptually similar constructs would mean that discriminant validity is not present, however for the more distinct concepts, the value of 0.85 is suggested. Generally, if an HTMT value is close to 1, the validity is not presented. In the Table 9, all of the values are below the threshold of 0.85 excluding (TMS-RS, 0.872), however, they are all below 0.90, which confirms the discriminant validity of the model.

Table 9. Discriminant validity according to the Heterotrait-Monotrait Ratio

	Comp	KSB	OT	RS	TMS
Comp					
KSB	0.737				
OT	0.792	0.805			
RS	0.356	0.222	0.244	0.299	
TMS	0.831	0.691	0.766	0.872	0.425

Note: Comp= Firm's competitiveness; KSB= Knowledge-sharing behavior; OT = Openness & Trust; RS = Reward system; TMS = Top management support

5.3. Structural model results

The conceptual model introduced in the Section 3.8. is tested via the structural equation modeling (SEM) using SmartPLS version 3.2.9. Significant level values and coefficient values were obtained through the bootstrapping method. Moreover, the path coefficients are measured in order to test the hypotheses. The effect of three constructs (top management support, openness & trust, reward system) on the knowledge-sharing behavior was explained by a variance of 47.5%. The knowledge sharing effect on the competitiveness of the firm was explained by a variance of 33%. R Square values and the path relationships are shown in Figure 8.

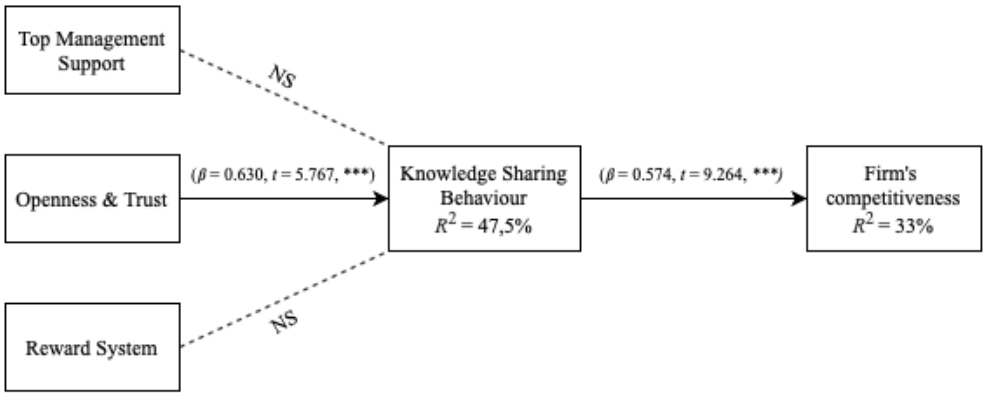

Figure 8. Structural model findings
Notes: *** p-value < 0.001; ** p-value < 0.005; * p-value < 0.01

The results of the SEM analysis have revealed that the top management support has no direct effect on the knowledge-sharing behavior, thus, H1 is not supported by the conceptual model. A relationship between the openness and trust and the knowledge-sharing behavior was found to be significant ($\beta = 0.630$, $t = 5.767$, $p < 0.001$), therefore H2 is supported by the conceptual model. According to the results of the SEM analysis, the reward system does not have a significant path to the firm's competitiveness, thus, H3 is not supported by the conceptual model. Moreover, the knowledge-sharing behavior showed a significant relation with the firm's competitiveness ($\beta = 0.574$, $t = 9.264$, $p < 0.001$), indicating H4 is supported by the conceptual model.

5.4. Multi-group analysis

The age of the respondents, their education level, company industry and job position were used as control variables in the multigroup analysis (MGA). The goal was to reveal whether there are differences regarding the knowledge-sharing behavior between the different age groups, academic and non-academic education level of respondents, their job position and the industry type they are involved in. However, the job position and industry type groups were eliminated from the analysis due to the uneven division of responses, therefore a very small group size – SmartPLS was unable to generate the output.

Regarding the age of the respondents, no significant paths were identified. In terms of the education level of the respondents, the path between openness & trust and knowledge-sharing behavior is not significant for the respondents with the non-academic education (high school, technical and vocational education and training), whereas it proved to be significant for the respondents with the academic education (from bachelor's degree to doctoral degree) (β =0.703, t =5.813, $p < 0.001$). This indicates that respondents holding an academic degree are more likely to share their knowledge if such factor as openness & trust exists in the organization.

5.5. Mediation analysis

A mediation analysis was conducted in order to identify whether the knowledge-sharing behavior mediates the relationship between three constructs of the conceptual model (top management support, openness and trust, reward system) and a firm's competitiveness. The results of the total indirect effects show that the knowledge-sharing behavior only mediates the relationship between the openness & trust and the firm's competitiveness (β = 0.399, t = 4.040, $p < 0.001$) and this path is significant. However, according to the total indirect effects values, the knowledge-sharing behavior does not mediate the relationship between the top management support and the firm's competitiveness, nor does it mediate the relationship between the reward system and the firm's competitiveness.

5.6. Qualitative analysis

In order to receive the information regarding the effects of the top management support, openness & trust and reward system on the knowledge sharing and the firm's competitiveness, the results of the questionnaire were analyzed through SmartPLS (confirmatory factor analysis (CFA), multi-group analysis (MGA) and mediation analysis). However, the respondents were offered to provide any insights regarding the topic of study in a form of comments at the end of the questionnaire. Out of 120 respondents, only 3 people anonymously shared their feedback. It was clear that the respondents highlighted the absence of the incentives towards the knowledge sharing in the organizations in Russia, contrasting with the knowledge sharing practices in Finland:

I worked both in Russia and in Finland. Unfortunately, my experience shows that in Russia neither the colleagues, nor the management or the organization, as a whole, need ideas, advice, changes. Since my experience is small, I want to believe that such facts are not present everywhere. Nevertheless, at the moment, I am convinced that such a culture is present in Finland, as both in universities and organizations, both management and colleagues are open to new things and also share with others.

– Respondent #26

Another respondent claimed that there is almost no knowledge sharing across departments in organization she works in, moreover the respondent wanted to switch to another job due to inability to share knowledge, which she thinks is a very important factor:

Unfortunately, the place where I am working now does not meet my needs, the knowledge of my not-so-original and erudite colleagues, in fact, is not interesting to me. Therefore, I share my knowledge only with one of my colleagues, with my manager and our marketing department. In addition, the colleagues who are sitting behind the wall are not interested in what we are doing in the marketing department, hence, there are even fewer points of contact for sharing knowledge. In the near future I'm planning to work in another organization, which is diametrically opposite regarding the structure and field. Knowledge sharing, as a part of internal communication, is the most important aspect in any job. I want to develop

not only the business which I'm working in, but also to have space for my personal development.

– Respondent # 7

Another informative comment was left by the Respondent # 33, noting that she was experiencing the lack of knowledge sharing, which restricted her potential opportunities. In her opinion, it was due to the absence of mentoring, which is very important in the technical field (the respondent stated the construction industry as a field of employment). She also mentioned that less experienced employees do not have a possibility to apply their theoretical knowledge in practice, thus, creating a vicious circle at the workplace:

I would say that the knowledge exchange is very weak. For me personally, the only way to learn something new is to understand it myself, dig into the literature, google, delve into, etc. In addition, in my technical field it's not enough just to read the theory, you still need to apply it to the real production problems, which does not always work out because such tasks are simply given to the more experienced professionals. I would really like to have a mentor at work. Therefore, I always try to help my younger colleagues myself.

– Respondent # 33

The certain tendency throughout the following comments illustrates that Russian employees have a clear idea of what the knowledge sharing is, moreover, they experience a strong deficiency of it, which has a negative effect on the overall workflow. The qualitative analysis throws the light on the problems of the knowledge management in Russian companies, furthermore these comments leave an impression of that employees are not sufficiently provided with the top management support in the workplace.

Chapter 6: Discussion. Practical implications of the research

This master's thesis' intention is to investigate the effects of the top management support, openness and trust and reward system on the knowledge-sharing behavior and the level of competitiveness among the organizations in Russia. The key theoretical objective was to see whether the conceptual model developed by Youssef et al. (2017) could be replicated and applied in the context of the Russian market. Moreover, the Structural Equation Modeling (SEM) method was employed in order to determine whether the concept of knowledge sharing in Russia has any specific peculiarities and to which extent the knowledge sharing in the Russian companies promotes the competitiveness of these companies. The main focus of this chapter is to report the major research findings, practical implications and also to justify the value of the following study.

6.1. Main findings

The overall goal of this master's thesis is to verify the effect of three independent latent variables influencing knowledge-sharing behavior directly and competitiveness of the organizations indirectly in a country-specific context, which has not yet received sufficient academic attention. The research framework was built upon the already existing studies which used the SEM methodology in order to test the impact of the top management support, openness and trust, and reward system on the knowledge-sharing behavior and further firm's competitiveness (Youssef et al, 2017). The academic research analysis on the organizational knowledge sharing and competitiveness in the Russian context has revealed that such a conceptual model has not been previously tested. Moreover, there is a lack of the academic knowledge on the factors influencing the knowledge sharing activities in Russia-specific business environment.

In this thesis, top management support, openness and trust, reward system, knowledge sharing, and firm's competitiveness were used as five main constructs to develop the research conceptual model (Youssef et al., 2017). Moreover, the survey questions were derived from previously validated studies showing that they can be easily applied in the organizational context worldwide. However, some demographic questions regarding the

education level of participants and their job-specific industry were modified in order to match the local regulations. The model was further examined according to the hypotheses developed. The results of the hypotheses testing are illustrated in the Table 10.

Table 10. A list of the supported and rejected hypotheses

Hx	Hypotheses	Results
H1	There is a positive relation between top management support and knowledge-sharing behavior	NS
H2	There is a positive relation between openness and trust and knowledge-sharing behavior	Supported
H3	H3: There is a positive relation between reward system and knowledge-sharing behavior	NS
H4	H4: There is a positive relation between knowledge-sharing behavior and firm's competitiveness	Supported

As was proposed in the Section 3.5.2., the link between the knowledge-sharing behavior and support from the top management has been acknowledged by many researchers (Amabile, Conti, Coon, Lazenby & Herron, 1996; Cabrera et al, 2006; Chiang, Han & Chuang, 2011; Davenport et al. 1998; Singh, Gupta, Busso & Kamboj, 2019; Wang & Noe, 2010). Consistent with the literature, the construct of the top management support was confirmed, approved and utilized in this master's thesis. In terms of Russian context, top management support has not proved to be effective due to the several knowledge-sharing hoarding factors. Among them are authority delegation, high competitiveness and limited time resources – quite often top management in Russian companies sees knowledge sharing practice as a loss of personal competitive advantage. Such a belief leads to low employee involvement, project participation and generally low organizational learning. Moreover, due to the vertical organizational hierarchy, managers tend to distance themselves from their subordinates, thus, creating a communication gap (Husted & Michailova, 2002).

Such a theoretical framework found its support in the research conducted in the Northwestern region of Russia. The findings (Section 5.3.) have revealed that top

management support does not have a direct effect on the knowledge-sharing behavior in the organizations located the Northwestern region of Russia. Moreover, the mediation analysis has not identified any indirect relationship between top management support and firm's competitiveness among the Russian companies according to the data received. The qualitative analysis of the participants' feedback has also proved that no adequate top management support is being provided for the employees in Russian companies investigated in this research, therefore, knowledge-sharing behavior is not stimulated with regards to this factor. The findings of this master's thesis align with the previous research by Husted & Michailova (2002), who confirm the existing obstacles in Russian companies towards the knowledge sharing. In their work, they conclude that being ambitious and having initiative can be a subject of shame or even stigmatization. This is due to the fact that Russian top management respects obedience and non-questionable subordination (Michailova, 1998, as cited in Husted & Michailova, 2002). Such features as high centralization, importance of formal rules, one-man authority and no tolerance towards pluralism and diversity only promote reluctance towards ideas and knowledge sharing between different departments (Husted & Michailova, 2002). The same lack of the cross-department knowledge sharing was mentioned in the questionnaire by several participants – they complain about indifference from the managerial side. Therefore, support from the top management is heterogenous and atypical to happen in Russian companies, and it is not considered as a significant factor influencing the knowledge-sharing behavior.

Section 3.5.3. postulates the link between the openness and trust and active knowledge sharing inside the companies (Blau, 1964; Cabrera, Collins & Salgado, 2006; Chowdhury, 2005; Connell & Voola, 2013; Gambetta, 1988, 2015; Levin & Cross, 2004; McNeish & Mann, 2010; Murphy, 2006; Willliams, 2001; Woods, 2001; Zand, 1972). The findings (Section 5.3.) support the proposed assumption. Moreover, it is validated by the SEM analysis – confirming the effect of openness and trust on the knowledge-sharing behavior in Russian organizations. Furthermore, the mediation analysis has shown that the relationship between openness and trust and firm's competitiveness is mediated by the knowledge-sharing behavior. The findings of this master's thesis do not align with the in prior research of Husted & Michailova (2002), Andreeva & Ihilchik (2009), and Michailova & Husted (2003) who indicate that there is low internal organizational trust when it comes to

knowledge sharing inside Russian companies. They mention the lack of loyalty towards the employer, tendency of not sharing information "with the outsiders" at one's own free will in the workspace and physical distance (Leonard & Sensiper, 1998, as cited in Husted & Michailova, 2002). Such a discrepancy in the results could be explained by the outdated data and general research deficiency regarding the modern organizational knowledge sharing approaches in Russia.

Section 3.5.5. postulates the link between the organizational reward systems and internal knowledge sharing (Lachance, 2000; Lee & Ahn, 2007; Milne, 2007; Reid, 2003; Svetlik, Stavrou-Costea & Lin, 2007; Youssef et al., 2017). The structural model results did not support the proposed assumption. This might be due to the fact that the rewards or "employee benefits" are not present in the Russian legislation and are quite often neglected due to not fitting the standards. Moreover, Ermolina & Tarotenko (2013) claim that employees in Russia often lack the legal protection in the workplace – researchers specify that such right violations are caused by the totalitarian mechanisms used by the employers, who exploit the remuneration for their own manipulative purposes. Moreover, a complete divergence between salaries and work tasks ruins the employees' motivation or any ambitions to succeed (Ermolina & Tarotenko, 2013). It contradicts with the idea of applying any effort as such endeavor will not be compensated in any way, not endowing the stimulus with a monetary worth or a valuable rationale. Furthermore, no supporting arguments of the assumption that organizational reward systems have a significant power on the knowledge-sharing behavior inside the Russian companies were found among the results of the SEM analysis, mediation analysis and qualitative analysis. Hence, the reward system construct was not acknowledged as an important prerequisite affecting the organizational knowledge sharing. However, due to the relative scarcity of the data and research on this topic, the following outputs might not reflect the organizational realities of the country-scale.

6.2. Conclusion

The aim of this master's thesis was to measure which of the such factors as top management support, openness & trust and reward system influences the organizational knowledge sharing activities in Russia and to detect whether it has any effect on the firm's overall

competitiveness. As a result, two out of the four developed hypotheses were confirmed. Moreover, the following research questions were identified:

- RQ1: How do openness and trust, top management support and reward systems promote the knowledge sharing in the organizations?

- RQ2: How does the knowledge sharing affect the overall competitiveness of the organization?

Taking the first research question into consideration, the results of this master's thesis indicate that respondents are more eager to be engaged in the cooperative demeanor provided that their organizational relations are ensured by the openness and trust. It positively influences and stimulates the employees, promoting common goals and commitment. Moreover, in the context of developing economy of Russia, considering its multi-cultural and faceted organizational mechanisms, openness and trust proved to be a fundamental factor which Russian companies are successfully adopting and implementing.

Russian management did not prove to be supportive in terms of promoting the knowledge flow inside the Russian firms. The qualitative analysis confirms the existing cross-departmental knowledge sharing barriers – each of three respondents stated that he/she does not directly communicate with their top management. Furthermore, unstable economic situation in Russia and low social protection of employees' force employers to lower the risks and to limit or completely eliminate the material stimulus. The results of this master's thesis differ from the other studies on the knowledge sharing in Russia, proving the functioning novelty of this thesis' conceptual model. Therefore, the perspectives of openness and trust are highly emphasized due to the revealed impact on the knowledge sharing processes in the organizations in Russia, which is a theoretical contribution by itself providing a new outline for the future research.

With regard to the second research question, the aim was to assess the existence of any correlations between the knowledge-sharing behavior and company's performance. the following research indicates that a firm could increase its competitive advantage through

establishing a reliable organizational environment. Hence, the linkage between knowledge-sharing behavior and competitiveness was confirmed. However, support from the top management and reward system did not prove to be sufficient mediators affecting the performance of the Russian enterprises.

The additional research results were discovered after the multi-group analysis of the respondents' demographic data was conducted. The following analysis shows that those with higher academic degrees are more likely to share their knowledge in Russian organizations if the organizational framework is based on mutual trust and an open working environment is maintained in a company.

6.3. Theoretical and practical implications

This thesis contributes to the studies of the knowledge sharing management, knowledge sharing activities and organizational performance through applying the conceptual model developed by Youssef et al. (2017) with regards to the Russian market conditions. Both academics and practitioners may find the findings of this research valuable. The revealed gaps in the theoretical knowledge are related to the lack of the research on Russian organizational culture, moreover, they invite for attention to the knowledge management development in the context of the emerging economies from the academic society. Furthermore, the findings of this master's thesis also provide potential stimuli for the researchers to examine this topic more in detail.

As an option, the initial conceptual model (Figure 6) could be modified, expanded and applied on the other demographic scope in order to investigate the determinants of the organizational knowledge-sharing behavior. As an alternative, a conceptual model focusing on the direct impact of the top management support, openness & trust and reward system could be developed. Besides, other constructs and mediators could be implemented into the model. An illustration of an alternative model is shown in Figure 9. Additionally, more theoretical literature and resources could be utilized, therefore, enriching the research value.

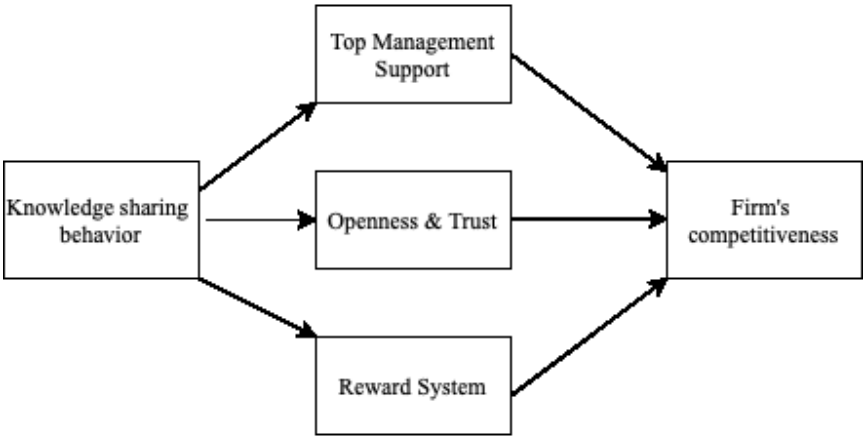

Figure 9. An alternative conceptual model

Speaking about the practical implications of this research, business and state-owned companies may find some of the insights covering the factors shaping the knowledge-sharing behavior inside the organizations. Due to a relatively new phenomenon in the Russian management culture, knowledge management has generally been lacking sufficient attention. Firstly, the findings should motivate practitioners to perceive openness & trust as a factor potentially increasing their competitiveness. Thus, ensuring openness and trust in the workplace, Russian companies may benefit from the internal knowledge exchange, therefore expanding their fields of expertise. Moreover, such motivational factors as reward system and mentorship of the top management have a great potential if they are efficiently implemented into the organizational knowledge sharing processes.

6.4. Limitations

This master's thesis has several limitations which have to be interpreted. As the research was conducted only in the Northwestern region of Russia, the sample may not be representative for the whole country. Moreover, there is no unified rule which regulates the sample size used for the SEM multi-group analysis – some academics suggest that the sample is representative if there are at least five cases per one observed variable (Bentler and Chou, 1987, as cited in Nikou, 2019), whereas others suggest ten cases are the bottom line (Nunnally, 1967, as cited in Nikou, 2019). Hence, the findings of this paper are limited

because several groups were eliminated from the multi group analysis due to the lack of observations.

The lack of the linkage between the top management support, reward systems and the knowledge-sharing behavior could specify the low participants' awareness regarding the concept of the knowledge sharing, meaning that respondents' prior knowledge on the knowledge sharing practices may vary from high, satisfactory, low or it can be completely absent. Moreover, this research is based on the prior work of Youssef et al. (2017), which has its own limitations, for example, they use a certain list of constructs (only five), which could be expanded.

This master's thesis postulates that the support of the top management, openness and trust and the presence of the reward system in the organizations in Russia are able to influence the knowledge-sharing behavior, which strengthens the firm's performance.

6.5. Future research

Knowledge-sharing practices and managerial activities may vary depending on the socio-cultural context or regional peculiarities (Andreeva & Ikhilchik, 2011; Kim et al., 2014; Magnier-Watanabe et al., 2011; Michailova & Husted, 2003; Sergeeva & Andreeva, 2016, as cited in Hussinki, Kianto, Vanhala & Ritala, 2017). Having a complex administrative governance structure combined with the vivid cultural dispersion, Russia represents a unique organizational management style. Therefore, a research on the knowledge sharing factors could be conducted in the other regions of Russia in order to reflect the results on a bigger scale. Moreover, a future research should be conducted with regards to alternative methods and creative approaches in terms of knowledge management and performance goals. One way to support the knowledge sharing habits inside an organization is to realize the power of a human capital by the Russian managers and to proactively implement employee trainings and to provide them with growth opportunities (Hussinki, Kianto, Vanhala & Ritala, 2017). In this case, the research idea of estimating the correlation between the trainings provided in the workplace and its impact on the firm's performance has aroused. Moreover, a development of the Russian management theory could be presented in the future

academic works in order to provide the contemporary insights into the knowledge management field in Russia and its perspectives.

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APPENDIX 1: CONSTRUCTS & ITEMS (Source: Youssef et al, 2017)

Construct	Code	Item
Top Management Support	TMS_1	Q18: My superior is enthusiastic about my knowledge sharing involvement in the department/company
	TMS_2	Q19: I can generally get the resources I need to share knowledge in my department/company
	TMS_3	Q20: The top management is highly supportive of knowledge sharing in my company
	TMS_4	Q25: The people I report to keep me informed about job-related and other issues of the department/company
	TMS_5	Q26: My department/company encourages knowledge sharing in action, not only in words
	TMS_6	Q27: We are continuously encouraged to bring new knowledge to the department/company
	TMS_7	Q28: Open communication is a characteristic of my department/company in relation to knowledge sharing
Openness & Trust	OT_1	Q11: There is a great deal of openness among my co-workers in knowledge sharing
	OT_2	Q12: Knowledge sharing has fostered teamwork in my department/company
	OT_3	Q13: My co-workers know that they can depend on each other for new knowledge
	OT_4	Q14: My co-workers stand up for each other to protect the knowledge shared
	OT_5	Q15: I do not doubt my co-workers' ability to share knowledge
	OT_6	Q16: The quality of knowledge shared among my co-workers is respectable

	OT_7	Q17: My co-workers will not share the wrong knowledge to put me at a disadvantage
Reward System	RS_1	Q21: My company rewards knowledge-sharing behavior
	RS_2	Q22: I am driven by rewards for knowledge sharing
	RS_3	Q23: The rewards offered by my company for knowledge sharing are attractive
	RS_4	Q24: Rewards are an essential motivation for knowledge sharing in general
Knowledge-sharing behavior	KSB_1	Q1: I share knowledge actively on formal occasions
	KSB_2	Q2: My co-workers share knowledge actively on formal occasions
	KSB_3	Q3: I share knowledge through written communication
	KSB_4	Q4: use my company's information system or database to store knowledge
	KSB_5	Q5: I share knowledge actively on informal occasions
	KSB_6	Q6: My co-workers share knowledge actively on informal occasions
Competitiveness	Comp_1	Q7: Knowledge sharing on formal occasions has increased my job knowledge and skills
	Comp_2	Q8: Knowledge sharing on informal occasions has increased my job knowledge and skills
	Comp_3	Q9: Collective knowledge sharing has increased my company's competitive advantage
	Comp_4	Q10: Knowledge sharing has resulted in new ideas and solutions for my company

APPENDIX 2: QUESTIONNAIRE TRANSLATION

The process of knowledge sharing in my organization:

1. Your age:

- 25 or below
- 25 to 35
- 36 to 45
- 46 to 55
- 56 or above

2. Your education:

- High school
- Technical and Vocational Education and Training
- Bachelor
- Master
- Ph.D. (Russia)
- Doctoral degree (Russia)
- Other

3. Industry you work in:

- Science, education
- Health, social insurance
- Construction, other industries
- Governmental, housing & communal services

- Service
- Finance
- Media
- Art
- Real Estate
- Other

4. Job position:

- Administrative
- Managerial
- Service-oriented
- Worker (executive)
- Technical
- Other

Section 2:

1. I share knowledge actively on formal occasions

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I share knowledge actively on formal occasions	○	○	○	○	○
2. My co-workers share knowledge actively on formal occasions	○	○	○	○	○
3. I share knowledge through written communication	○	○	○	○	○

4. I use my company's information system or database to store knowledge	○	○	○	○	○
5. I share knowledge actively on informal occasions	○	○	○	○	○
6. My co-workers share knowledge actively on informal occasions	○	○	○	○	○
7. Knowledge sharing on formal occasions has increased my job knowledge and skills	○	○	○	○	○
8. Knowledge sharing on informal occasions has increased my job knowledge and skills	○	○	○	○	○
9. Collective knowledge sharing has increased my company's competitive advantage	○	○	○	○	○
10. Knowledge sharing has resulted in new ideas and solutions for my company	○	○	○	○	○
11. There is a great deal of openness among my co-workers in knowledge sharing	○	○	○	○	○
12. Knowledge sharing has fostered teamwork in my department/company	○	○	○	○	○
13. My co-workers know that they can depend on each other for new knowledge	○	○	○	○	○
14. My co-workers stand up for each other to protect the knowledge shared	○	○	○	○	○
15. I do not doubt my co-workers' ability to share knowledge	○	○	○	○	○

16. The quality of knowledge shared among my co-workers is respectable	○	○	○	○	○
17. My co-workers will not share the wrong knowledge to put me at a disadvantage	○	○	○	○	○
18. My superior is enthusiastic about my knowledge sharing involvement in the department/company	○	○	○	○	○
19. I can generally get the resources I need to share knowledge in my department/company	○	○	○	○	○
20. The top management is highly supportive of knowledge sharing in my company	○	○	○	○	○
21. My company rewards knowledge-sharing behavior	○	○	○	○	○
22. I am driven by rewards for knowledge sharing	○	○	○	○	○
23. The rewards offered by my company for knowledge sharing are attractive	○	○	○	○	○
24. Rewards are an essential motivation for knowledge sharing in general	○	○	○	○	○
25. The people I report to keep me informed about job-related and other issues of the department/company	○	○	○	○	○
26. My department/company encourages knowledge sharing in action, not only in words	○	○	○	○	○

27. We are continuously encouraged to bring new knowledge to the department/company	○	○	○	○	○
28. Open communication is a characteristic of my department/company in relation to knowledge sharing	○	○	○	○	○

Thank you so much for participating! If you have any comments, you can safely leave them here. Constructive feedback is necessary if there are any flaws!